

TO HARM AND BE HARMED:
AGENCY AND THE PERCEPTION OF MORAL EVENTS

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When individuals tell stories from their own lives, they do so by constructing and interpreting these stories in a way that places them within the overarching structure of their moral values. Though preserving one's moral identity as a "good person" is an important goal, individuals often act in ways that are self-serving or cause harm to others. One way that individuals maintain a positive moral identity following immoral behaviors may be to dampen down their ascriptions of their own intentionality for said behaviors—thus aligning one's memories for the event with one's moral code. Across eight studies, I find that this alignment process leads to predictable biases in both event perception and autobiographical memory. In studies 1 and 2, I show that immoral events are construed at a higher level than non-moral events, and that immoral behaviors that individuals have performed themselves are construed at a lower level than immoral behaviors that they have not. The final five studies examine the perception of moral events through the structure of the moral dyad, which posits that moral situations are comprised of "agents" (those with the capacity to harm others) and "patients" (those who are harmed as a result the agent's actions). Study 3 provides evidence that individuals are better able to recall moral patient events than moral agent events. Studies 4 through 6 examine the processes underlying this effect, and find that both event negativity and perceived intentionality impact memory recall for moral events. Studies 7 and 8 test a proposed mechanism for this effect: that agency increases feelings of psychological completeness for moral events

BIOGRAPHICAL SKETCH

Chelsea Helion is a native of West Chester, Pennsylvania¹, a place that sparked her love of long-distance running, cheesesteaks, Wawa markets, and the Philadelphia Phillies. She graduated from Temple University in 2009, with a degree in psychology and cognitive neuroscience. Following graduation, she moved to Ithaca, NY and began graduate school at Cornell University, studying social and personality psychology. She was accepted into the Ithaca Manhattan Graduate Initiative in Neuroscience (IMAGINE) program and moved to New York City in 2012 to study neuroscience at Weill-Cornell Medical College. Her next move is roughly 40 blocks uptown, where she will begin a post-doctoral research position at Columbia University.

¹ She was technically born in Englewood, New Jersey, but would prefer not to talk about it.

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Chapter 1

Introduction

“How often do we tell our own life story? How often do we adjust, embellish, make sly cuts? And the longer life goes on, the fewer are those around to challenge our account, to remind us that our life is not our life, merely the story we have told about our life. Told to others, but—mainly—to ourselves.”

-Julian Barnes, *The Sense of An Ending*

In 1991, President George Bush nominated federal circuit Judge Clarence Thomas to the Supreme Court of the United States. Following Thomas’s Senate confirmation hearings, a private FBI interview with Thomas’s former employee—Attorney Anita Hill—was leaked to the press. In the interview, Hill claimed that Thomas had sexually harassed her, asked her out on dates multiple times, suggested that the two watch pornography together, and made lewd comments about pubic hair in the workplace. Thomas’s version of events was notably different than Hill’s, he claimed to have never asked Hill out on a date, and further claimed that he considered Hill a friend that he had helped significantly at the outset of her career (Smolowe, 1991). The obvious question is: who was lying? Clearly some version of these events transpired between Hill and Thomas, but both the nature of these events and the extent to which a moral violation (sexual harassment) occurred, remains unclear.

These types of viewpoint discrepancies in the narrative of events happens frequently, and particularly in the moral domain: BP CEO Tony Hayward referred to the amount of oil leaked into the Gulf of Mexico in 2010 as “relatively tiny” (The Guardian, 2010), Private Lynndie England—famous for abusing prisoners in the Abu Ghraib scandal—claims that the prisoners got

the “better end of the deal” (NBC News, 2013), and recording artist Chris Brown claims to have blurry memories of assaulting his then-girlfriend the pop singer Rihanna (Rolling Stone, 2009). What is clear from these examples is that the role that an individual plays in a moral event has a powerful impact on how the event is interpreted, explained, and perhaps even recalled.

A great deal of evidence suggests that our memories are imperfect representations of the past. How a memory is retold depends a great deal on the context of the retelling, and incorporates both present goals and updated information (Holland & Kensinger, 2011). One area where memory may be particularly altered is in how we think about and recollect autobiographical moral events. A great deal of literature has focused on how we make moral judgments about the immoral behaviors of others (Haidt, 2001; Greene et al., 2004; Kohlberg, 1973). A number of factors influence judgment of others’ immoral or harmful behaviors, these include perceived intentionality on the part of the moral transgressor (Gray & Wegner, 2008; Ames & Fiske, 2013), whether the moral transgressor is an in-group member (Gino, Ayal, & Ariely, 2009), whether the harm was due to an action or an omission (Schaich-Borg et al., 2006), and if the harm involved physical contact (Cushman, Young, & Hauser, 2006). In contrast, relatively little work has examined how we evaluate moral events in our own lives (for a notable exception see: Escobedo & Adolphs, 2010).

The research presented below expands on this previous work by showing that negativity, intentionality, and personal agency all impact how autobiographical moral events are construed and recalled. While we use perceived agency to evaluate the moral behaviors of others (Cushman, Young, & Hauser, 2006) exactly *how* personal agency impacts our perceptions and judgments of autobiographical moral events remains unexplored. The primary goal of this research is to test the hypothesis that individuals think about and remember moral actions in

which they were agents—or in control of the outcome of the event—differently than they think about actions in which they lacked agency, and instead suffered the consequences of an agent's actions. The studies below examine how we protect our own self-concept, how our memory serves this goal, and the precise mechanisms by which we may alter our autobiographical memories.

Morality can be self-serving

For most individuals, it is important to maintain a self-concept of being a moral person (Aquino & Reed, 2002). Prior research has shown that one way that individuals do this is by disregarding base-rate information when it comes to making predictions about their own moral behavior (Epley & Dunning, 2000). In one study, the researchers had undergraduate participants predict both how many daffodils they would purchase for charity at a later date and how many daffodils the average undergraduate would purchase. Individuals significantly overestimated the charitable behavior of their future selves—while 83% of participants said that they would purchase a daffodil, only 43% of participants actually did. Further, while participants predicted that, on average, they would purchase 2 daffodils, in actuality only 1.2 were purchased. Both of these numbers fell far short of the predicted number for the self, but are strikingly close to those predicted for the average undergraduate. Participants had predicted that only 56% of the student population would purchase a daffodil, and that those individuals would purchase, on average, 1.4 daffodils each. These results are indicative of a biased process by which individuals think about their own moral behavior. While Epley and Dunning claim that these “holier than thou” beliefs are due to errors in self and social prediction, I offer another, complementary, explanation: that our sense of moral superiority is rooted in errors and biases in autobiographical memory.

Goals lead to motivated memory. Memory distortion happens very frequently, as current goals can impact the perception and memory of emotional events in one's life during both encoding and retrieval (Johnson & Sherman, 1990; Ochsner & Schacter, 2003; Levine & Safer, 2002). Recalling an event doesn't happen in a vacuum, and is subject to both motivational and cognitive processes that influence the quality and accuracy of what is recalled. How events are related to our current goals determines the nature of our initial emotional response and how/which cognitive processes will be used in remembering it (Ochsner & Schacter, 2003). Because individuals have a strong desire to maintain a positive moral identity, this motivation may guide reconstruction and retrieval of moral memories.

Chapter 2 begins to explore this process by focusing on the construal of immoral behaviors. I first focus on how the performance of an immoral behavior changes the way in which the immoral action itself is perceived. Across two studies, I examine how moral content (Study 1) and personal history (Study 2) impact level identification of moral behaviors. By level identification, I mean the extent to which individuals identify actions and behaviors as being relatively abstract or concrete (Vallacher & Wegner, 1987). For example, an immoral behavior like looking off of someone else's test can be categorized abstractly as "cheating on an exam" or it can be categorized concretely as "checking someone else's answer". As abstract categorizations tend to be more affectively charged and have more personal meaning (Critcher & Ferguson, 2011), I predict that individuals who have performed immoral behaviors themselves will be *less* likely to categorize them abstractly. This low level construal for personal immoral actions is self-serving, and allows us to "clean up" our memory for the times in which we acted immorally by maintaining the view that we have not violated moral rules.

One efficient way that individuals can both act immorally and preserve a positive moral identity seems to be by distorting memory for the times they agentically did something wrong. Two ways that individuals can do this include underplaying the frequency and negativity of these events. Chapter 3 builds on this idea by focusing on *moral typecasting* (Gray & Wegner, 2009), which claims that moral events are comprised of a dyadic structure, wherein entities known as “agents” (those with the capacity to perform immoral acts) harm individuals known as “patients” (those who experience the outcomes of the agent’s behaviors) (Gray, Young, & Waytz, 2012). When individuals are recalling moral events in their lives, I predict that moral patient events will be considered more emotionally impactful than moral agent events. As both emotion and arousal have been shown to influence memory intensity for autobiographical life events (Phelps & Sharot, 2008; Talarico, LaBar, & Rubin, 2004), these processes will bias memory such that moral patient events will be better recalled than moral agent events. Across four studies, I show that perceived moral status (agent/patient) influences memory for moral events, such that individuals are able to recall more events in which they were a moral patient than those in which they were a moral agent (Study 3), that moral patient experiences are remembered as more negative than moral agent experiences and thus are more easily recalled (Study 4), that this relationship between negativity and memory intensity is moderated by the extent to which the moral agent’s actions were viewed as intentional (Study 5), and that increases in perceived agent intentionality are linked to more accurate recall of moral events (Study 6).

Chapter 4 looks at a potential mechanism that may underlie the tendency for moral patient events to be better recalled than moral agent events: the relationship between moral status (agent/patient) and psychological completeness. Tasks that are considered incomplete or unfinished are better recalled than those that were completed (Zeigarnik, 1935; Savitsky,

Medvec, & Gilovich, 1997). I predict that moral patients and moral agents will diverge in the extent to which they feel that moral events are truly over or complete. I hypothesize that this is due to two factors: the extent to which amends are made, and the extent to which the causes of the event are understood. As agents are more in control of both of these factors (they both cause moral events and are the ones who choose to make amends), I expect that agents will consider the event to be more psychologically complete than will patients. In study 7, I test this hypothesis, and find that agents do indeed feel that moral events are more psychologically complete than do patients, and that this effect is mediated by the extent to which amends were made. In study 8, I propose and test a model wherein the effect of moral status on psychological completeness is mediated by both the extent to which amends were made and the extent to which causes feel understood, operating in parallel. Taken together, these studies suggest that personal agency impacts how immoral behaviors are mentally represented, how they are remembered, and the extent to which they feel psychologically complete.

Identifying action

Any action that an individual performs can be thought about in multiple ways varying along a continuum from concrete to abstract. For example, drinking a morning cup of coffee can be described concretely as holding a warm cup or bringing a hot beverage to one's lips. However, to a sleep-deprived individual who has recently become the parent of a newborn, drinking a morning cup of coffee can be seen as a necessary revitalization, perhaps shortly behind breathing and eating in terms of importance. Thus coffee drinking, like any action, can be represented at different levels of abstraction, ranging from relatively more concrete to more abstract. Where an action is placed on this continuum is based on a multitude of factors,

including the goals that the individual has at the time, the meaning with which they imbue the action, and individual differences in personal agency (Vallacher & Wegner, 1989).

This process is the primary focus of *action identification theory* (Wegner & Vallacher, 1986; Vallacher & Wegner, 1987; Wegner et al., 1984), which rests on the idea that every action can be categorized within lower-level (more concrete) or higher-level (more abstract) identities. This distinction between high level and low level can be understood by thinking about the endogenous qualities of the action itself: low-level identifications answer the question of “how” an action is performed and high-level identifications answer the question of “why” an action is performed (Trope & Liberman, 2003). Or, to return to the coffee example, *how* one drinks coffee is by bringing the cup to one’s lips and *why* one drinks coffee is to feel revitalized. The former would be considered a relatively low level identification and the latter would be considered a relatively high level identification.

Individuals tend to categorize their own actions at a higher level than at a lower level, likely due to an increased focus on the consequences, motivations, and meanings of their behaviors (Vallacher & Wegner, 1989). These high level identifications serve to make everyday actions more fulfilling and worthwhile—while tooth brushing can be thought of as rubbing bristles across one’s teeth, it is both more satisfying and more in line with the reasons *why* teeth are brushed to instead think about the behavior as “maintaining dental health.” As acting morally is often an important part of one’s identity, it seems plausible that immoral behaviors (e.g. cheating, lying) will tend to be construed at a higher level than non-moral behaviors (e.g. plant watering, list-making). However, once an immoral action has been performed, individuals might strip the act of affective and personal significance by instead construing it at a lower level. For example, for a student who has looked off of someone else’s paper, it may be less threatening to

their moral identity to identify the action as “checking someone’s answer” rather than “cheating on a test.” In Chapter 2, I test this idea, and show that immoral behaviors tend to be categorized at a higher level than non-moral behaviors (study 1), but that this tendency is diminished when individuals are categorizing immoral actions that they themselves have completed (study 2).

Determining agency

In order for any action to exist, much less be characterized, there must first exist an agent who performs said action. For the purposes of the research presented below, agents are those who have the capacity to act—for an agent, action is inevitable. This means that inaction (i.e. omission) on the part of an agent is the performance of an action in and of itself (Himma, 2009). For example, if an agent chooses *not* to jump in front of the subway to save a child, this is as much of an action as choosing to do so. However, not all behaviors qualify as agentic actions. Some have suggested that agentic actions are only those behaviors that are “intentional under some description” (Davidson, 1980, essay 3; Wilson & Shpall, 2012). By intentionality, I mean having the capacity for mental states that are about something else—that is, a belief, desire, or volition to both want and/or achieve a goal (Himma, 2009). This distinction, intentionality in some form, separates out events like heartbeats or pupil dilation from more goal-directed behavior like watching an entire season of “House of Cards” on a beautiful Sunday afternoon. The presence of intentionality in action is an important one, as intention acts as a signifier to both mental state and to an individual’s dispositions (Epley & Waytz, 2009). In addition, perceived intentionality is one of the primary factors that determines moral blame or responsibility (Rim, Hansen, & Trope, 2013; Alicke, 2000).

While assessing intention is important, an individual must first assess if an action is rooted in a mind that is capable of forming and acting upon intentions. As agents move

throughout the world, they do so in the presence of other individuals. Often, these individuals are themselves agents, capable of performing actions based on intentions or desires; however, some entities (e.g. adults) possess more of the characteristics of agency than others (e.g. infants). Some have suggested that all entities are evaluated on two dimensions: 1) *Conscious experience*, or the capacity to experience emotion, pain, and body states, and 2) *intentional agency*, or the ability to exhibit control, act morally, plan for the future, and experience conscious thought (Gray, Gray, & Wegner, 2007). While entities vary along these dimensions in a continuum, the two dimensions of mind perception match nicely with the classic Aristotelian separation into individuals as agents (those high in perceived agency) and patients (those high in perceived experience) (Gray & Wegner, 2009; Eshleman, 2014). These dimensions of mind perception also map onto assessments of moral blame and punishment—individuals report that entities that are high in agency deserve more blame for harms and entities that are high in experience would be more unpleasant to harm (Gray, Gray, & Wegner, 2007).

Moral Agents and Moral Patients

An extension of mind perception occurs in the moral domain, wherein agents not only have the capacity to act, but also do so within a moral framework. Moral agency is complex; it involves not only being responsible for any action that occurred, but also possessing some knowledge of right and wrong (Eshleman, 2014). This is why the brutal murder of a child by a fully functional adult is considered to be more morally blameworthy than if an out-of-control dog had performed the same action. Rational adults are expected to have moral knowledge, and to use this knowledge when forming intentions and pursuing goals. Violations of moral norms by rational agents are thus met with more blame and punishment (Pizarro, Uhlmann, & Salovey, 2003).

Some have suggested that most moral situations can be split into a dyadic structure, one that involves a moral agent (the person that acts morally or immorally) and a moral patient (the person who experiences the consequences of the agent's actions) (Gray & Wegner, 2009; Gray, Waytz, & Young, 2012). Gray and Wegner (2009) claim that while these two roles (agent and patient) are fluid in practice, they are viewed as mutually exclusive within the realm of moral judgment; a process they term *moral typecasting*. In one study, they showed that agency and patiency have an inverse relationship, such that when an individual is perceived to have more agentic characteristics (e.g. control), they are also perceived to have less patient characteristics (e.g. they would feel less pain when harmed). In another study, they isolated this inverse relationship to the moral domain, showing that increases in perceived *moral* agency, but not agency more generally, decreases perceptions of patiency. In a third study, they looked at the causal relationship between moral agency and patiency. In this study, participants were given a scenario about two fictional characters: Michael and Jeffrey. The researchers manipulated the extent to which Michael and Jeffrey possessed typical agent and typical patient characteristics. For example, in one scenario Jeffrey is described as being genetically less sensitive to pain and Michael is described as being more sensitive to pain. They then presented participants with scenarios in which both Michael and Jeffrey had stolen a car. Participants then assessed which of the two individuals should be held as more responsible for the crime. The results showed that participants reported that the individual who had been described with characteristically fewer patient qualities (i.e. was less able to feel pain) was held to be more responsible for stealing the car. Thus, his lack of patiency led to an implicit increased perception of agency. In follow-up studies they also showed that the effects of perceived agency and patiency are long-lasting, such that being cast as a moral agent in one scenario leads to increased perceptions of moral agency

(and decreased perceptions of moral patiency) in future moral scenarios. Finally, they also demonstrated that individuals “fill in” parts of the dyad when none exist, and that individuals are more willing to allocate more pain to agents because they are seen as being less sensitive to pain, and thus are more able to withstand it.

Chapter 3 builds upon this foundation of the moral dyad, and extends it to autobiographical memories for moral events. A relative paucity of literature in moral judgment has looked at how individuals examine and consider moral events in their own lives, and whether one’s role in the moral dyad, referred to here as “moral status”, shapes the quality and memory of one’s moral experiences. As adults are capable of being both moral agents and moral patients, if they have experienced a moral event in their lives, they have experienced being an agent and/or being a patient. Across four studies, I examine the differences between memories for events in which one was a moral agent or a moral patient. Specifically, I show that individuals can recall more moral patient events than moral agent events, that this ease of recall is mediated by the negativity of the event, that agent intentionality moderates the relationship between moral status (patient/agent) and memory intensity, and that increases in perceived agent intentionality are related to increases in overall memory accuracy.

Emotion and moral memory

While motivation certainly plays a role in the biased recall of moral memory, I suggest that there are also cognitive processes at work that lead to this effect. Emotional events retain their significance for longer periods of time than non-emotional events; they are recollected and rehearsed more frequently and memories for these events are reported as being more intense (Talarico & Rubin, 2003). In the research presented below, I suggest that as moral patiency is

characterized by the experience of emotion, moral patient events are more emotionally intense than moral agent events, and hence are better remembered.

Moral memory and psychological completeness

Another factor that may influence how negative moral events are remembered is whether the event feels psychologically complete. By psychologically complete, I mean the extent to which the event feels finished or an individual has a sense of closure. When events are not psychologically complete, they tend to “stick” with us. This feeling is better known as the Zeigarnik effect, or the tendency to recall interrupted tasks more than uninterrupted tasks (Zeigarnik, 1935). In the classic Zeigarnik study, participants were given a series of tasks, but half of the tasks were interrupted before they could be completed. The researchers found that participants remembered the interrupted tasks better than the tasks that they had finished. This effect is likely driven by the amount of attention that we give interrupted events, which may cause them to take up more of our mental space.

The effect can even operate on the implicit level. In one study, Bargh and colleagues (2001) primed an implicit performance goal by having participants complete a word search puzzle that either included words related to high-performance (e.g. compete, succeed) or neutral words (e.g. turtle, staple). Following the priming task, half of the participants completed a task that had an achievement component (solving word search puzzles), while the other half of the participants completed a delay task that did not have an achievement component (filling out one’s family tree). Participants in the interruption condition (those who completed the delay task) then completed the task with the achievement component (the word search task). The researchers hypothesized that this delay would act as an interruption of implicit goal pursuit, and would increase the strength of the high-performance goal. This was exactly what they found—

participants who had been primed with an achievement goal and who had completed a delay task first outperformed participants in the other three conditions at the word search task.

This nagging feeling of “unfinished business” has been shown to underlie negative affective experiences such as regret. Savitsky, Medvec, and Gilovich (1997) found that rumination over the psychologically incomplete underlies differences in the cognitive availability of regretful actions and inactions. In the first study, participants made a choice between which regret they thought about more frequently: a time that they had acted, or a time that they had refrained from acting. The majority of participants (60.5%) indicated that they more frequently thought about their regretted inaction than their regretted action. In the second study, they showed that this increased rumination made regrets of inaction easier to recall. In the third study, they expanded upon these results, and showed that regrets of inaction that feel open-ended are those that are ruminated upon the most. Taken together, these results potentially show that actions that feel unfinished or incomplete stay with us, and become part of the narrative that we construct about our lives.

In Chapter 4, I examine the role that psychological completeness may play in memory biases for moral events. I hypothesize that moral patient events will feel significantly more psychologically incomplete than moral agent events due to two factors: 1) the extent to which amends are made, and 2) the extent to which causes feel understood. Prior research supports this hypothesis, in one study, researchers found that the victims of harmful events perceive them to be more open than do the perpetrators, but this effect is reduced significantly if the event has been forgiven (Zechmeister & Romero, 2002). In addition, individuals tend to focus on unexpected outcomes more than expected outcomes (Clary & Tesser, 1983), thus, patients—who may not have been expecting outcome—may spend more time focusing on the event than agents,

who controlled the outcome's occurrence. In this sense, moral agents have insight into the causes of moral events in a way that moral patients do not. As moral agents are in control of the extent to which amends are made, and have more insight into the causes of these events, I predict that they will feel that the events are more psychologically complete than will moral patients.

Focusing on the negative

Though moral events can be both positive and negative, the research presented below focuses exclusively on how individuals evaluate and recall negative moral events. This choice was made for four reasons: 1) Negatively-valenced events have a greater impact on individuals than positively-valenced events of the same type and number, thus, bad things bring about both larger and longer-lasting effects on people's lives (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), 2) Positive and negative interactions are weighted differently within interpersonal relationships, and would not be perfect counterparts for one another (Gottman, 1998), 3) Bad events elicit more processing than good events, even when event expectancy is held constant (Abele, 1985), and 4) Bad interactions color opinions more than good ones—though both positive and negative interactions with friends influence relationship quality, negative interactions seem to have a stronger impact on mental health (Schuster, Kessler, Aseltine, 1990). Individuals adapt to emotional events, but this adaptation may not occur at an equal rate—put plainly, bad events take more time to mean less (Brickman, Coates, & Janoff-Bulman, 1978). Taken together, these findings indicate that experiencing negative events may have a powerful and long-lasting influence on both individuals' interpersonal relationships and the narratives that they tell about their lives.

Chapter 2

The construal of moral events

On June 22 2012, former Penn State assistant football coach Jerry Sandusky was found guilty of 45 counts of sexual abuse. When asked about the allegations, Sandusky claimed that what had occurred between himself and underage boys amounted to “horseplay” and that he had “maybe tested boundaries.” The boys talked about the events quite differently, referring to what happened to them as “emotional agony”, “sick indulgences”, and molestation. There are obvious differences between these characterizations of the same event—for Sandusky, the description of the event is action-focused, and stripped of valence and moral content. For the victims of his abuse, the event is emotionally laden, and full of moral approbation.

Action identification theory focuses on the relationship between the behaviors that people perform and the way in which they think about those behaviors (Vallacher & Wegner, 2012). How an action is thought about can change the meaning of the action itself, and can guide behavior towards action completion. A great deal of research in social psychology has shown that the same action can be construed on multiple levels ranging from high to low (Trope & Liberman, 2003; Trope & Liberman, 2010). High-level construals involve conceptualizing the action in an abstract way—one that captures the meaning of the event. Low-level construals instead involve conceptualizing the action in terms of the concrete details of its actualization (Liberman, Sagristano, & Trope, 2002). For example, breaking an item that someone lent you could be represented at the high level as “damaging another person’s property” and at a lower level as “dropping something on the ground.”

The goal of the research below is to show that the typical level of construal for immoral events tends to be high level, but that this shifts to a lower level when individuals themselves

have completed the immoral action. This prediction rests on the idea that abstract or high level construals lead to increased affective sensitivity, and imbue the target action with meaning and place it within a broader context (Critcher & Ferguson, 2011; Trope & Liberman, 2010). As affective processes drive moral evaluations (Haidt, 2001), it seems likely that immoral actions will tend to be construed at a higher or more abstract level than non-moral actions. In study 1, I test this hypothesis by using the behavioral identification form (BIF; Vallacher & Wegner, 1989), which presents participants with a target action (e.g. voting) and provides them with two possible identifications for the action: one high level (“letting your voice be heard”) and one low level (“pulling a lever”). Participants were asked to select the identification that best describes the target action. As immoral behaviors are usually thought of as violations of abstract principles (e.g. honesty, trust) and tend to evoke emotional states, I predict that participants will more frequently select high level identifications to describe immoral target actions than non-moral target actions.

While immoral actions may tend to be identified at a high level, I hypothesize that this is not always the case. Work on moral disengagement suggests that when individuals have acted in ways that violate their moral codes, they disengage from their behavior by cognitively restructuring the meaning of the event (Bandura, 1999). This restructuring can take many forms, including euphemistic labeling (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), displacement of responsibility (Milgram, 1974), diffusion of responsibility (Bandura, Underwood, Fromson, 1975), and dehumanization of the victim (Cikara, Farnsworth, Harris, & Fiske, 2010). Study 2 builds on this idea, suggesting that when individuals have completed immoral actions themselves, they will morally disengage by identifying the action at a low level, so that it is both less affectively charged and less morally reprehensible.

Study 1: Moral events are identified at higher levels

Previous research has shown that situations are construed in terms of moral principles when they are more distant (Eyal, Liberman, & Trope, 2008) and that moral transgressions made in the distant future are judged more harshly than those made in the near future (Agerstrom & Bjorklund, 2009). Taken together, this suggests that morality lends itself to abstraction. Judgments of morality arguably require the situation of the action within a broader context, which necessitates a high level representation. For example, imagine kicking a dog that is unable to experience pain. Would this action be a moral violation? Perhaps, but certainly less so than if the dog had been physically harmed. This is because actions are not in and of themselves are not immoral, morality is added when an action becomes situated within a larger framework of right and wrong, which is largely determined by the emotions elicited by the event (Gray, Schein, & Ward, 2014). In this study, I examine whether there is a stronger tendency for immoral actions to be identified at a high level (meaning more abstract or valenced) than at a low level.

Method

Participants

104 participants (45 males, $M_{age}=31.81$, $SD_{age} = 11.67$) were recruited from Amazon's Mechanical Turk website and paid 10 cents for their participation.

Materials and Procedures

Following consent, participants were given the following instructions from the behavioral identification form (BIF; Vallacher & Wegner, 1989):

“Any behavior can be described in many ways. For example, one person might describe a behavior as “writing a paper,” while another person might describe the same behavior

as “pushing keys on the keyboard.” Yet another person might describe it as “expressing thoughts.” This form focuses on your personal preferences for how a number of different behaviors should be described. Below you will find several behaviors listed. After each behavior will be two different ways in which the behavior might be identified. For example:

1. Attending class

a. sitting in a chair

b. looking at a teacher

Your task is to choose the identification, a or b, that best describes the behavior for you. Simply place a checkmark next to the option you prefer. Be sure to respond to every item. Please mark only one alternative for each pair. Remember, mark the description that you personally believe is more appropriate for each pair.”

Participants then completed a subset of five non-moral target behaviors from the BIF and five questions that involved an immoral target behavior. To determine common immoral target behaviors, 45 participants were recruited via Amazon’s Mechanical Turk website, and were asked to list what they thought were the fifteen most common immoral behaviors that an individual would perform in his or her lifetime. These lists were combined, and coded by two research assistants in order to determine which immoral actions were perceived to be the most common. These actions were then used to create the target immoral actions that participants categorized in this study (for a copy of the materials, see Appendix). For example, the target behavior “*Cheating on a significant other*” could be identified at a low level as “*hooking up with someone else*” or at a high level as “*being unfaithful*”. Following these measures, participants completed a brief demographic survey.

Results

For each target behavior, selection of the low-level identification was coded as 0, and selection of the high-level identification was coded as 1. The five target behaviors from the original BIF were summed and averaged to create a composite non-moral behavioral identification score and the five immoral target behaviors were summed and averaged to create a composite immoral behavioral identification score. As predicted, in a paired t-test, immoral behaviors were identified at a higher-level significantly more often ($M = .67$, $SD = .24$) than non-moral behaviors ($M = .59$, $SD = .27$), $t(103) = 2.34$, $p < .05$ (Fig. 1).

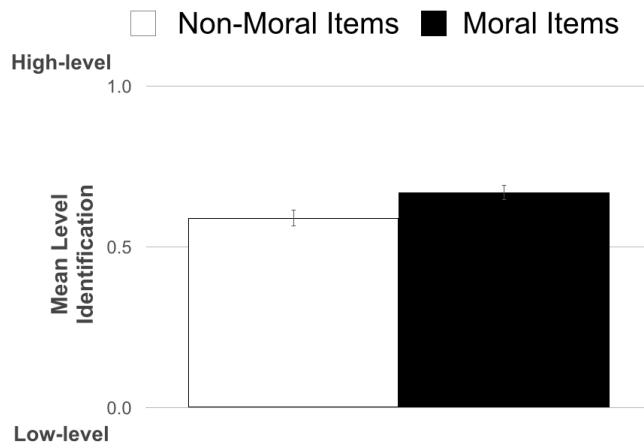


Figure 1. Moral items are identified at a significantly higher level than non-moral items on a modified Behavioral Identification Task (BIF).

Discussion

Study 1 indicates that immoral events tend to be construed at a higher level than non-moral events. Across ten target actions (five immoral, five non-moral), participants identified the high level as better describing the immoral behaviors than the non-moral behaviors. These

findings support the prediction that moral events are thought about at a higher level of abstraction than non-moral events.

Study 2: But what if I've done it?

Some have suggested that as individuals become more familiar with performing an action, they tend to identify it more in terms of its high-level implications and meaning rather than its low-level details (Vallacher & Wegner, 2012). For example, for a child learning to ride a bike, the focus is on moving one pedal in front of the other and maintaining balance—only when the behavior has been fully learned does bike riding become an act about getting where you want to go. The goal then, is to attain an optimal level of identification, that is, the level that facilitates goal attainment.

If immoral actions are typically identified at a higher level so as to promote the attainment of moral goals, once an immoral action has been completed, it may no longer be optimal to identify the behavior at a high level. As individuals (even those that have done immoral things) still seek to identify as moral people and hold moral goals, I predict that performing an immoral action will make people more likely to identify the action at a lower level, thus stripping the action of its valence and its link to more abstract moral principles.

Method

Participants

51 participants (38 males, $M_{age} = 32.75$, $SD_{age} = 11.10$) were recruited from Amazon's Mechanical Turk website, and were paid 50 cents for their participation.

Materials and Procedures

Participants were given the same instructions as in Study 1. Participants then identified eleven immoral target behaviors as high level or low level (for a copy of materials, see

Appendix). Following action identification, participants were then asked to indicate if they themselves had performed any of the immoral target behaviors. Participants were given the options of “Yes”, “No”, or “I would prefer not to answer.” Following these measures, participants completed a brief demographic survey.

Results

For each target behavior, selection of the low-level identification was coded as 0, and selection of the high-level identification was coded as 1. Each target behavior also received a second score—if participants had reported performing the behavior themselves, it was scored as 1, if they reported not having done so, it was scored as 0, and if they reported that they would prefer not to respond, the score was omitted for that target behavior (Note: this was only the case for two instances of one behavior, cheating on one’s significant other).

Two identification scores were calculated for each participant, one for the behaviors that they had reported performing and one for the behaviors that they had reported not performing. These scores were calculated by summing and averaging the scores for target behaviors that participants indicated that they had performed and summing and averaging the target scores for target behaviors that participants indicated they hadn’t performed. The items showed acceptable internal consistency (Cronbach’s $\alpha = .68$). The item-total correlations for the immoral BIF items ranged from .11 to .54.²

² For an item-by-item analysis, see Appendix.

In order to further analyze the data, generalized estimating equations (GEE) were used to model the relationship between experience (has/hasn't done the action) and level categorization³. A GEE was used in order to adjust for the interdependence between participants' judgments across the 11 items (Ballinger, 2004). A binary logistic regression model was used, with experience (coded as 0 = Hasn't done and 1 = Has Done) as the predictor variable. The dependent variable in the GEE analysis was level categorization (coded as 0 = low level and 1 = high level). As predicted, the analysis shows a significant main effect of experience on level categorization ($B = -.63$, $SE = .22$, $p < .01$) (Fig 2.).

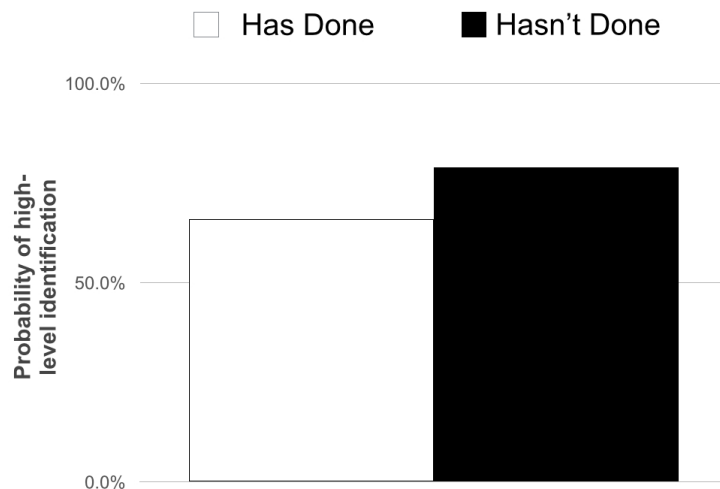


Figure 2. Immoral actions that individuals have done are more likely to be identified at a lower level than immoral actions that participants have not done.

³ For further analysis, in a paired t-test, participants identified behaviors that they had performed at a significantly lower level ($M = .68$, $SD = .27$) than behaviors that they hadn't done ($M = .79$, $SD = .26$), $t(50) = -2.70$, $p < .01$.

Discussion

In this study, participants indicated whether an immoral target action could best be identified using a high level description or a low level description. Critically, participants also reported whether they had performed the target action themselves. The results indicate that prior experience performing an immoral target action is linked to an increased likelihood of making a low level identification. An alternate explanation for these results reverses this causal chain; perhaps immoral acts that individuals are more likely to construe at a lower level may be those actions that people are more likely to perform. In order to address this question, I ran a second GEE, this time taking into account the overall frequency of the action within the sample population (as measured by the percentage of individuals who had reported completing the action). If individuals were more likely to perform actions that they construe at a lower level, we would expect overall frequency of the act to predict level categorization. A binary logistic regression model was used, with experience (coded as 0 = Hasn't done and 1 = Has Done) and frequency of the action (the percentage of individuals who had performed the action) as predictor variables. The dependent variable in the GEE analysis was level categorization (coded as 0 = low level and 1 = high level). The analysis shows that there is still a significant effect of experience on level categorization ($B = -.72$, $SE = .26$, $p < .01$), but there is no effect of frequency on level categorization ($B = .31$, $SE = .44$, $p > .40$). This suggests that items that are undertaken more frequently are not necessarily those that are categorized at a lower level; rather, it is the experience of having performed an action that impacts level categorization.

This effect may be due in part to cognitive dissonance—as individuals generally hold the goal to act morally, once they have performed an immoral behavior they have created a dissonant relationship between their goals and their actions (Festinger, 1962). One way to reduce this

dissonance may be to resolve the conflict by changing the way one thinks about the immoral behavior. For example, if looking off of someone's paper is thought about as "checking an answer" rather than "cheating on a test", it is easier to bring this action in line with one's identity as a good moral person. Another related explanation may be moral disengagement (Bandura, 1999). When individuals have performed an immoral action, they may seek to dampen down any affective responses to their immoral behavior. One way of doing so may be to identify the action at a lower level, or one that has less meaning and moral significance.

General Discussion

In Study 1, I showed that immoral actions are construed at a higher level than non-moral actions. Study 2 built on this result, and showed that whether an immoral action is identified at a high level depends on if the individual has performed the act himself or herself. Taken together, these results indicate that while immoral behaviors tend to be identified at a high level, this process depends critically on one's prior experiences.

The tendency for immoral behaviors to be identified at a higher level may be due to myriad factors, among them, that high level identification may facilitate greater self-control. Activation of high-level construals leads to greater self-control than activation of low-level construals due to an increased focus on the global and superordinate features of the action at a higher-level (Fujita, Trope, Liberman, & Levin-Sagi, 2006). Construing the immoral behavior at a high level may be in the service of making the action more in conflict with one's goals—individuals who identify looking off of someone's paper as "cheating on a test" may be less likely to do so. However, self-control often fails, and once the action has been performed, there may be a shift towards low level identification in order to minimize the perceived threat to the superordinate goal of being a good person. This may partially explain the lay theory of "slippery

slopes” in the moral domain (Tenbrunsel & Messick, 2004). Once an immoral action has been completed, it may be stripped of its moral and affective content, thus making it more likely to be repeated in the future. One reason that individuals may knowingly commit immoral acts is because these acts may serve other, low level goals. If an individual who considers himself to be a moral person cheats on a test, he may do so in the service of a lower level goal (getting an A) at the expense of a more superordinate, or globally held goal (acting morally). In this sense, for individuals who hold the superordinate goal of being moral, immoral behaviors can be thought of as self-control failure.

Another explanation for the results of study 2 may be the amount of psychological distance that individuals feel from the immoral action. When individuals have performed an immoral action, they may feel psychologically closer to the event, which may be leading to more low level categorizations. However, reconciling this explanation with the results of study 1 is perhaps not as straightforward. While individuals may not have all cheated on their partner (one of the immoral target actions), they also have probably not all measured a room for carpeting (one of the non-moral target actions).

Prior research on construal level has shown that individuals are more likely to use abstract communication to describe desirable in-group and undesirable out-group behavior, and concrete communication to describe undesirable in-group and desirable out-group behavior (Maass, Salvi, Arcuri, & Semin, 1989). In these studies, participants were from rival sections of the Italian city of Siena and were recruited during horseracing season, when racers from each town section (or *contrada*) compete against one another. Participants were shown cartoons depicting either an in-group member from their *contrada* or an outgroup member from a rival *contrada*, performing desirable (e.g. helping another person) or undesirable (e.g. littering)

behavior. The researchers then had participants categorize the action that they were observing via a multiple-choice response (study 1) or via free response (study 2). The results showed that participants were more likely to categorize or describe in-group undesirable behaviors as being relatively more concrete and out-group undesirable behaviors as being relatively more abstract. The studies presented above build upon these results, and show that people show the same pattern of describing undesirable behaviors at a more concrete level when the actor is perhaps the closest in-group member of all (oneself). This is perhaps due to the increased stability of high level identifications—individuals are motivated to think that in-group members are more characterized by their good behaviors, and thus construe those behaviors in a way that makes them more emblematic of positive traits. In the same sense, individuals will be motivated to construe their own immoral behaviors at a low level identification that are not representative of underlying negative traits. Future work should examine this question, in order to gain a better sense of how individuals are arriving at abstract or concrete representations of immoral actions.

These studies show that actions in the moral domain are perhaps thought about differently than non-moral actions, and that prior experiences can have a powerful effect on the psychological processes underlying the perception of these events. While Jerry Sandusky and his victims are equally close to the events that transpired, the moral and emotional ramifications of these experiences are perhaps entirely different based on the experience of agency—or of being the perpetrator rather than the victim. Agency thus changes not only the experience of the action, but also the level at which it is mentally represented. In the next chapter, I aim to show that this factor—personal agency—can also have a lasting impact on how actions are perceived, interpreted, and recalled.

Chapter 3

Biases in Moral Memory

In this chapter, I aim to show that personal agency influences autobiographical memory for moral events. As mentioned in the introduction, moral situations can be split into two entities, moral agents (or those who enact immoral behaviors) and moral patients (or those who experience the outcome of the agent's actions) (Gray, Young, & Waytz, 2012). With this in mind, the moral dyad is an ideal place to start in terms of examining the interplay between personal agency and autobiographical memory.

I hypothesize that autobiographical memories for moral patient events will be significantly easier to recall than memories for moral agent events. Furthermore, I predict that this is because moral patients recall events as having been significantly more negative than do moral agents. One of the primary reasons that this may be the case is due to the negative emotionality that accompanies victim experiences (Baumeister, Stillwell, & Wotman, 1990). A potential difference in perceived negativity of the event could be impactful from a memory standpoint. Dreben, Fiske, and Hastie (1979) showed that individuals have greater recall for negative behavioral information over neutral or desirable behavior information, regardless of the order in which the information is presented. In addition, even individuals who report having experienced happy childhoods are able to generate a majority of negative memories (Kreitler & Kreitler, 1968).

Increased negativity and emotionality may lead to an increase in ease of recall and memory vividness for moral patient events as compared to moral agent events. Individuals have lay theories about highly emotional memories—specifically that these memories have a “flashbulb effect”, and are remembered as clearly as a photographic image of the memory would

be (Brown & Kulik, 1977). One way in which emotion impacts the retrieval process is by boosting the *recollective experience*—the event feels like it is being relived, and this intensity increases confidence in the recalled memory (Phelps & Sharot, 2008; Talarico & Rubin, 2003). Emotion does seem to boost memory for the event a bit, but it provides an even larger boost to one’s subjective sense of recollection (Sharot & Yonelinas, 2008).

Two important factors that influence the vividness of memory recall are emotional arousal and personal involvement (Holland & Kensinger, 2011). When information feels more related to you, it is more thoroughly encoded and less likely to be forgotten (Mitchell, Macrae, & Banaji, 2004). As seen in Chapter 2, once an individual has performed an immoral behavior, they are more likely to identify it at a lower, less affective, level. This level shift may allow moral agents to dampen their affective experience and feelings of personal involvement for the actions that they have performed, thus leading to less vivid memories for the event.

Intentionality and moral memory

One contributor to event negativity may be the extent to which the moral agent acted intentionally. Prior research supports this hypothesis—intentional harms are judged as worse than unintentional harms, even when their outcomes are the same (Ames & Fiske, 2013) and intentional harms physically “hurt” more than unintentional harms (Gray & Wegner, 2008). Intentionality may hurt more because it’s viewed as a strong indicator that someone is actually trying to cause you pain—adding insult to moral injury.

Previous research has demonstrated that some behaviors might be better recollected because they are more diagnostic than others (Skowronski & Carlston, 1987). For example, frequent lying says more about a person’s character than frequent pie eating does, and when individuals make choices about whom to interact with, it is perhaps better to remember who

tends to lie more than who tends to eat pie. As intentionally causing another person harm could be viewed as diagnostic of one's moral character, intentional harms may be better recalled than unintentional harms. However, I do not think that this will be the case across both members of the moral dyad. I predict that intentional harms are likely to be viewed as more negative, and thus better recalled for moral patients, but that the opposite will be true for moral agents. After all, agents have reasons for their intentional actions, and likely acted in service of a desired goal.

In the research presented below, I show that individuals are better able to recall events in which they were moral patients than those in which they were moral agents, and that this memory asymmetry is due to differences in perceived negativity of the event. I further test and show that this effect is moderated by the extent to which agents were perceived to have acted intentionally, and that increases in perceived agent intentionality are associated with increases in memory accuracy.

Study 3: More Patients than Agents

Negative moral events tend to involve harm (Ward, Olsen, & Wegner, 2013). As both being harmed and harming others evoke negative emotions, we would expect moral events to be reasonably emotional. However, this prediction is complicated by the fact that some individuals caused the harm (agents), and others received it (patients). As discussed above, individuals tend to have better recall for emotional events. While harm in and of itself may make the event emotionally impactful, I suggest that it does not do so equally for both members of the moral dyad. Instead, I hypothesize that, as moral patient events are a more aversive and potentially more arousing experience, individuals will recall more moral patient events in their lives than moral agent events.

Method

Participants

One hundred participants (66 males, $M_{age}=30.73$, $SD_{age}=10.4$) were recruited from Amazon's Mechanical Turk website and paid 25 cents for their participation.

Materials and Procedures

Following consent, participants were presented with a brief explanation of the moral dyad. Moral agents were defined as *“individuals whose intentions and actions bring about harmful events”* and that moral patients were defined as *“individuals who experience feelings and emotions brought about by the moral agent's actions.”* Following these definitions participants were given an example of moral agency and patiency:

“Jenny and Elizabeth are waiting in line at a concert. When the doors to the concert hall open, Jenny sees that Elizabeth is in front of her, and pushes past Elizabeth to get inside first. Elizabeth falls down and cuts her knee.”

Participants were then told that the same individual can be a moral agent or a moral patient depending on the situation in which he or she finds himself or herself. They were then presented with another scenario showing an agency/patiency “flip” from the first example:

“Jenny and Elizabeth are close friends. Jenny tells Elizabeth that she and her boyfriend, Mark, have been fighting recently. Elizabeth tells her not to worry, and that everything will be fine. Later that day, Jenny sees Elizabeth and Mark passionately kissing. Jenny turns away and begins crying.”

Following these examples, participants were asked to think about the previous six months, and to recall the number of times that they had been a moral patient and a moral agent during that time period on a sliding scale from 0 to 10+. Which role they were asked to recall first (agent or

patient) was counterbalanced across participants. They were also asked to write down a word that they associated with each recalled memory (in order to ensure that they were recalling concrete events rather than merely estimating the number of times that they had been a patient or an agent). Following both recall tasks (agent and patient), participants completed a brief demographic survey.

Results

The effect of agent-patient status on the number of recalled memories was examined with a repeated-measures ANOVA with moral status as the within-subjects factor and condition order as a between-subjects factor. The number of memories recalled was the dependent measure. As predicted, there was a main effect of moral status on number of recalled memories, such that participants recalled that they had been a moral patient ($M = 2.73$, $SD = 2.91$) significantly more times than they recalled being a moral agent ($M = 1.72$, $SD = 2.12$) over the six-month period, $F(1,98) = 11.46$, $p < .005$.

Intriguingly, there was also a significant interaction between condition order and number of memories recalled in each moral status condition $F(1,98) = 15.38$, $p < .0005$. Post hoc analyses revealed that participants who had recalled being a moral patient first recalled significantly more instances of moral patency ($M = 3.50$, $SD = 3.30$) than participants who recalled being a moral patient second ($M = 1.96$, $SD = 2.24$), $F(1,98) = 7.445$, $p < .01$. Participants who had recalled being a moral agent first recalled marginally more instances of moral agency ($M = 2.12$, $SD = 2.07$) than participants who recalled being a moral agent second ($M = 1.32$, $SD = 2.12$), $F(1,98) = 3.645$, $p = .06$. Furthermore, when individuals recalled patient events first, they recalled significantly more patient events ($M = 3.50$, $SD = 3.20$) than agent

events ($M = 1.32$, $SD = 2.12$), $F(1,98) = 26.70$, $p < .0005$. When individuals recalled agent events first, there was not a significant difference between the number of recalled patient events ($M = 1.96$, $SD = 2.24$) and agent events ($M = 2.12$, $SD = 2.07$), $F(1,98) = .14$, $p > .70$ (see Figure 3).

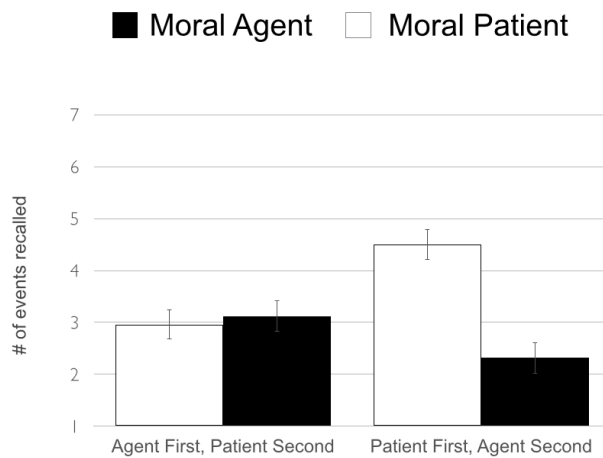


Figure 3. The order in which participants recall moral agent and patient events influences the total number of moral patient events recalled.

Discussion

In the study above, I show that individuals unequally report moral agent and patient events, such that individuals report that they were moral patients significantly more frequently than they were moral agents. However, this effect is influenced by which role is recalled first. Previous research has shown that when an individual is perceived as a moral agent or patient, this characterization “sticks”, such that the person is perceived as being more of an agent or a patient in later scenarios (Gray & Wegner, 2009). Intriguingly, the interaction observed in this study may be indicative of this type of moral typecasting within the self. Once individuals have recalled agent experiences they are less able to recall patient experiences (as compared to those

who recalled patient events first), and once individuals have recalled patient experiences they are less able to recall agent experiences (as compared to those who recalled agent events first). Much as agency or patiency sticks to our perceptions of others, it is possible that these characterizations may similarly impact our perception of ourselves.

While this is an interesting question for future research, in order to understand the emotional framework of moral events from the agent or patient perspective, it is necessary to first examine differences in the affective qualities that underlie these two roles at the inter-individual level. The interaction observed in this study suggests that recalling an event from one perspective may preclude one's recalling event from the other. For this reason, the rest of the studies were run between-subjects, in order to get a better sense of the properties of moral agent and patient memories as they function dyadically between two people rather than within the same person. The next study focuses on one potential divergence in the recall of moral agent and moral patient events: perceived event negativity. Specifically, I predict that moral patiency is a more negative experience than moral agency, and thus that moral patient events will be both more detailed and easier to recall.

Study 4: Negativity and Moral Memory

As the research presented thus far shows, one's role in a moral event has a profound impact on how it is perceived and how it is recalled. Or, perhaps a country song put it best—sometimes you're the windshield, and sometimes you're the bug (Chapin-Carpenter, 1992). For the bug, hitting the windshield is a life-changing (indeed, life-ending) experience. For the windshield, or the person driving the car, it's a minor incident that is often not worthy of notice. While moral agents probably feel a bit more than the driver of the bug-killing car when they

morally transgress, it seems likely that moral patients will frequently have a more negative experience than will moral agents.

Study 3 showed that individuals were able to recall more moral patient events than moral agent events. In Study 4, I focus on a potential mechanism for this result, specifically examining the role that event negativity plays in the recollection of moral events. I hypothesize that individuals will report that moral patient events are more negative than moral agent events, and that this heightened negativity will lead to an increase in both reported ease of recall and in the number of details that individuals are able to remember about the event.

Method

Participants

Two hundred and fifty (160 males, $M_{age}=28.75$, $SD_{age}=8.78$) participants were recruited from Amazon's Mechanical Turk website and paid 25 cents for their participation.

Materials and Procedures

As in study 3, participants were again given a brief explanation of the moral dyad and the same examples. Following these examples, participants were randomly assigned to either the moral agent condition or the moral patient condition. In the moral agent condition, participants were presented with the following prompt:

*“Take a moment and think about a time when you were a **MORAL AGENT**, a time when your actions or intentions led to another person being harmed (physically, emotionally, or mentally).”*

Participants in the moral patient condition were presented with the following prompt:

*“Take a moment and think about a time when you were a **MORAL PATIENT**, a time when the actions of another individual led to you being harmed (physically, emotionally, or mentally).”*

Following memory recollection, participants in both conditions were asked how easy it was to recall being a moral agent/patient on a scale from 1 (*“Very difficult”*) to 7 (*“Very easy”*), how many sensory details they were able to recall from the event (0, 1-2, 3-4, 5-6, 7+), and how negative the event was on a scale from 1 (*“Not at all negative”*) to 7 (*“Extremely negative”*). Following these measures, participants completed a brief demographic survey.

Results and Discussion

As predicted, there was a main effect of condition on ease of recall, such that participants in the moral patient condition found it significantly easier to recall an event ($M = 5.03$, $SD = 1.61$) than participants in the moral agent condition ($M = 4.30$, $SD = 1.90$), $t(248) = 3.28$, $p < .005$. In addition, participants who recalled being a moral patient reported recalling more sensory details ($M = 2.72$, $SD = .981$) than participants who recalled being a moral agent ($M = 2.46$, $SD = .96$), $t(248) = 2.19$, $p < .05$. Participants in the moral patient condition also indicated that the event was significantly more negative ($M = 4.88$, $SD = 1.51$) than participants in the moral agent condition ($M = 4.15$, $SD = 1.60$), $t(248) = 3.74$, $p < .0005$.

Negativity and sensory details. In order to test our prediction that negativity mediates the relationship between moral status (moral agency and patiency) and the number of sensory details recalled, I conducted a mediational analysis (Hayes, 2013). Moral status predicted both the number of sensory details recalled ($b = -.27$, $SE = .12$, $p < .05$) and the negativity of the event ($b = -.74$, $SE = .20$, $p < .0005$). The relationship between moral status and the number of sensory details recalled dropped to non-significance ($b = -.08$, $SE = .12$, $p > .40$) when adjusting for

differences in negativity of the recalled event. A bias-corrected bootstrap 95% CI indicated that the indirect effect through negativity was significant, $a \times b = -.184$, 95% CI: [-.32, -.09] (Fig 4).⁴

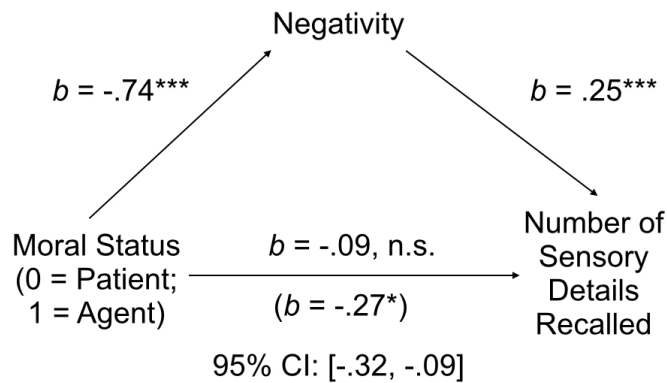


Figure 4. Event negativity mediates the relationship between moral status and the number of sensory details recalled about the event.

Negativity and ease of recall. Negativity also mediates the relationship between moral status (moral agency and patiency) and the number of ease of recall. Moral status predicted both ease of recall ($b = -.73$, $SE = .22$, $p < .05$) and the negativity of the event ($b = -.74$, $SE = .20$, $p < .0005$). The relationship between moral status and the ease of recall dropped to non-significance ($b = -.38$, $SE = .21$, $p > .05$) when adjusting for differences in negativity of the recalled event. A bias-corrected bootstrap 95% CI indicated that the indirect effect through negativity was significant, $a \times b = -.35$, 95% CI: [-.60, -.15].⁵

These results indicate that not only is being a moral patient a significantly more negative experience than being a moral agent, but that this negativity leads to both enhanced recall for sensory details about the event and to increased subjective ease of recall. This heightened

⁴ For reverse mediation model, see Figure 14 in the Appendix.

⁵ For reverse mediation model, see Figure 15 in the Appendix.

negativity based on moral status (patient/agent) may partially underlie the effect observed in study 3. That participants can recall more details surrounding moral patient events suggests that these events may be more vivid in their memory. Furthermore, individuals report that patient events are easier to recall, suggesting that these memories may be more accessible than agent events.

Study 5: Intentionality, Negativity, and Memory Intensity

As study 4 showed, moral patient events are considered to be significantly more negative than moral agent events, and this negativity mediates the relationship between moral status and the extent to which the event is recalled. However, what underlies this increased negativity? Certainly experiencing harm is an unpleasant and aversive experience, but harming others is by no means pleasant (Milgram, 1974; Nichols, 2002). In this study, I show that one important contributor to event negativity is the extent to which the moral agent was perceived to have acted intentionally.

Prior research has shown that intentional harms both hurt more and are viewed as more blameworthy than unintentional harms, even when the outcomes are the same (Gray & Wegner, 2008; Ames & Fiske, 2013). Thus, I propose a model wherein agent intentionality moderates the relationship between moral status and memory intensity, and that this interactive effect is mediated through event negativity (see Figure 5).

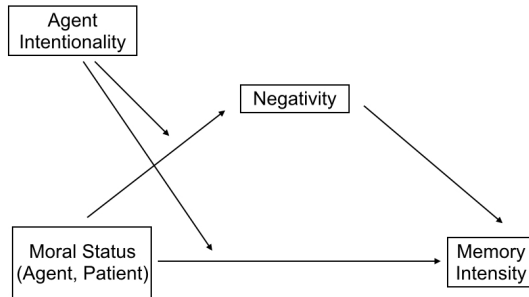


Figure 5. Proposed model of the relationship between moral status and memory intensity, with negativity as a mediator variable, and agent intentionality as a moderating variable between moral status and memory intensity.

By memory intensity, I mean the extent to which a memory feels vivid, is easy to recall, and the extent to which individuals feel confident in the accuracy of their memory. The choice of focusing on memory intensity in this study, rather than recalled details associated with the memory itself is a deliberate one. When we think of memory retrieval, a distinction can be made between the process through which the memory is recollected and the details of the memory itself. While both are common measures of memory, emotions have been shown to enhance the subjective sense of recollection, while its influence on memory accuracy is mixed (see: Phelps & Sharot, 2008; Sharot, Delgado, & Phelps, 2004). The previous study focused on the latter, and found that negativity mediated the relationship between moral status and the number of details that individuals could recall about the event. This study focuses on whether moral status, negativity, and intentionality also influence the former, or the process by which the memory is recalled.

Method

Participants

Two hundred participants (143 males, $M_{\text{age}}=28.38$, $SD_{\text{age}}=8.22$) were recruited from Amazon's Mechanical Turk website and paid 15 cents for their participation.

Materials and Procedures

As in studies 3 and 4, participants were given an explanation of the moral dyad and the same examples. Participants were then randomly assigned to one condition of a 2 (moral status: agent or patient) x 2 (agent intent: intentional or accidental) full-factorial design. Moral status was manipulated as in Study 4. Agent intent was manipulated by having participants recall a time when the harm caused by the event was either accidental or intentional. Following memory recollection, participants in all four conditions were asked how easy the memory had been to recall, how vivid their memory was for the event, how confident they were in their memory for the event, and how negative the event was. All questions were evaluated on a seven-point scale from 1 (*“Not at all”*) to 7 (*“Extremely”*). Following these measures, participants completed a brief demographic survey.

Results

One participant failed to complete the experiment, leaving us with 199 participants. The measures of confidence, ease, and vividness were summed and averaged (Cronbach's alpha = .86) to create a measure of memory intensity.

Intentionality and Negativity. Replicating our prior results, participants in the moral patient condition reported that the event was significantly more negative ($M = 4.81$, $SD = 1.49$) than participants in the moral agent condition ($M = 4.35$, $SD = 1.36$), $F(1,195) = 5.34$, $p < .05$. There was no main effect of intentionality, such that intentional actions ($M = 4.74$, $SD = 1.44$) were not

more negative than accidental actions ($M = 4.42$, $SD = 1.43$), $F(1,195) = 2.48$, $p > .10$. The interaction between moral status and intentionality was significant, $F(1,195) = 15.10$, $p < .0005$ (Figure 6). Post hoc analyses revealed that for intentional harms, patients experienced more negativity ($M = 5.32$, $SD = 1.34$) than did agents ($M = 4.12$, $SD = 1.29$), $F(1,195) = 19.49$, $p < .0005$. For accidental harms, there were no significant differences between patients ($M = 4.27$, $SD = 1.45$) and agents ($M = 4.57$, $SD = 1.40$) on reported negativity, $F(1,195) = 1.22$, $p > .20$.

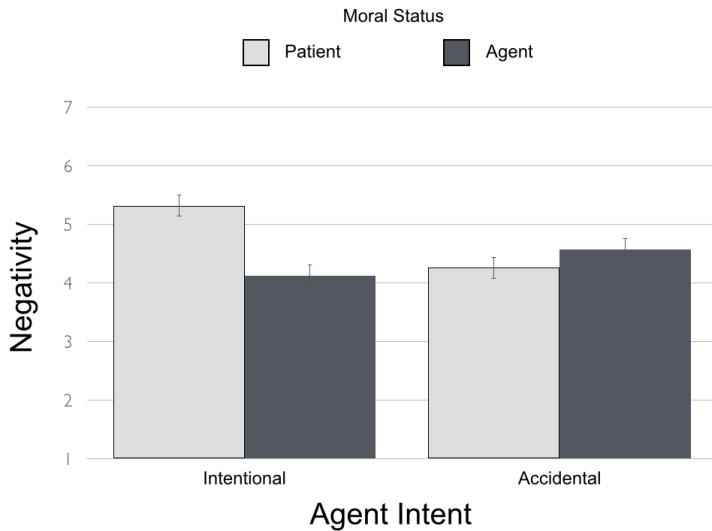


Figure 6. Agent intent moderates the relationship between moral status and negativity.

Intentionality and Memory Intensity. There was not a significant main effect of moral status, $F(1,195) = 2.33$, $p = .13$, on memory intensity and there was a marginal main effect of intentionality, $F(1,195) = 2.89$, $p = .09$, on memory intensity. Importantly, there was a significant interaction between moral status and agent intent, $F(1,195) = 5.33$, $p < .05$ (Fig. 7). Post hoc analyses revealed for intentional harms, patients experienced greater memory intensity

($M = 4.84$, $SD = 1.58$) than did agents ($M = 4.01$, $SD = 1.61$), $F(1,195) = 7.45$, $p < .01$. For accidental harms, there were no significant differences between patients ($M = 4.71$, $SD = 1.41$) and agents ($M = 4.88$, $SD = 1.52$) on memory intensity, $F(1,195) = .30$, $p > .50$.

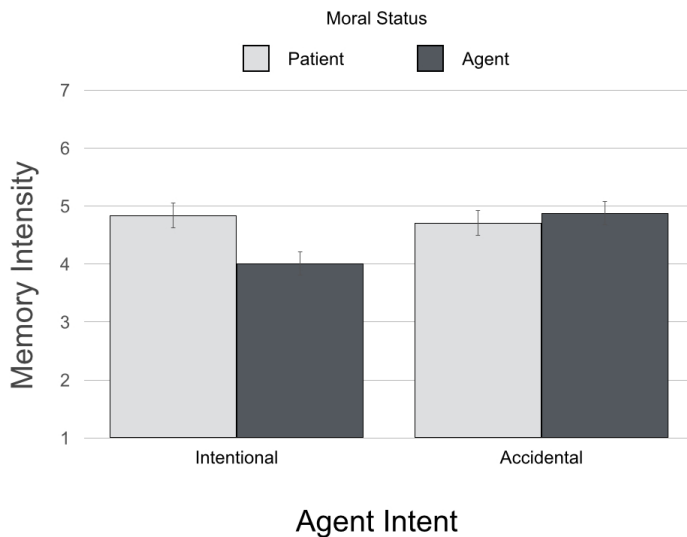
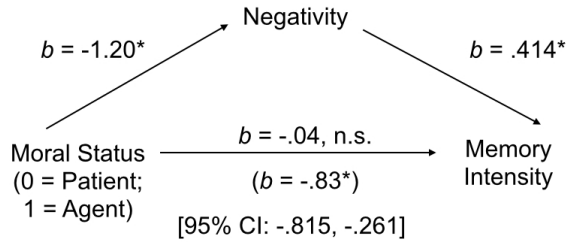


Figure 7. Agent intent moderates the relationship between moral status and memory intensity.

Testing the proposed model. As shown above, intentionality moderates both the relationship between moral status and negativity, and also the relationship between moral status and memory intensity. As study 4 showed that negativity mediates the relationship between moral status and memory recall, and these results show that negativity is moderated by agent intent, I predict that there will be a conditional indirect effect of moral status on memory intensity through negativity. PROCESS (Hayes, 2013) was used to estimate the model coefficients and conditional direct and indirect effects. As shown in Figure 8, the effect of moral status on negativity is contingent upon agent intent, as seen by the significant interaction between moral status and intent in the model of negativity ($b = -1.51$, $SE = .39$, $p < .0005$). There is a significant indirect effect of status on memory intensity when the agent acted intentionally ($b = -.498$, 95% CI: $-.820$, $-.262$) but not when the agent acted accidentally ($b = .126$, 95% CI: $-.107$, $.389$). Negativity thus mediates the

effect of moral status on memory intensity when the harm was intentional, but not when the harm was accidental.

INTENTIONAL



ACCIDENTAL

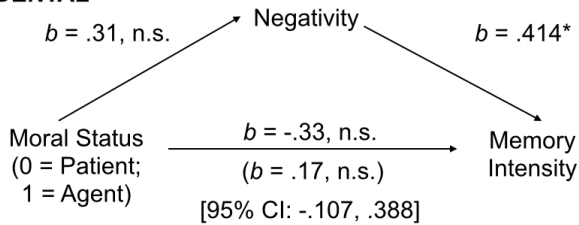


Figure 8. Agent intent moderates the indirect effect of moral status on memory intensity through negativity, and moderates the direct effect of moral status on memory intensity.

Discussion

Study 5 showed that the relationship between moral status, negativity, and memory intensity is moderated by whether or not the agent's action was intentional. As predicted, while patients still said the event was more negative than agents, this effect was moderated by whether or not the agent had acted intentionally. Intentionality also moderated the relationship between moral status and memory intensity. This suggests that intent is not only taken into account when thinking about how negative the event was, but also that this perceived intentionality further influences the feeling of subjective recall for the event through its effect on negativity.

Pizarro and colleagues (2006) showed that if a moral agent's bad behavior was viewed as more intentional, this led to both more moral blame and more memory distortions. In this study,

participants read a vignette about a man named Frank who had walked out on a restaurant bill. Participants either read a version in which Frank's behavior had been unintentional (his daughter had been involved in a serious accident), or intentional (he had deliberately—and with great enjoyment—left the bill unpaid). When recalling the events at a later date, participants in the intentional condition not only said that Frank had walked out on a larger bill than he did, but that the degree of memory distortion (differences between the recalled and the actual amount that Frank walked out on) was associated with how much moral blame participants thought that Frank deserved. In the study below, I look at how moral blame and ascriptions of agent intentionality may impact memory recollection for real-world moral events.

Study 6: Play ball

On April 23rd 2014, Yankees pitcher Michael Pineda was discovered using pine tar—a substance that allows for greater ball control and is against the rules of Major League Baseball—during a game with the Boston Red Sox. Pineda was ejected from the game in the second inning. While the Red Sox came back to win the game, fans on both teams were outraged. This game thus presented an opportunity to examine how factors like perceived agent intentionality impact memory recall for real world moral events.

For this study, one could make two potentially competing predictions. As a Yankees pitcher had broken the rule, one might expect Red Sox fans to feel more morally victimized, and thus have greater memory for details surrounding the game. However, because the Red Sox went on to win the game, Red Sox fans may feel more positively about the game than Yankees fans (who, if their pitcher had not been ejected, may have won the game). As fans of both teams would thus have compelling cases for feeling morally wronged by the pitcher's rule-breaking, we

predicted that the extent to which the pitcher was imbued with agency for his immoral actions would drive memory accuracy, regardless of team affiliation.

Method

Participants

40 participants (29 males, $M_{age}=31.6$, $SD_{age}=8.83$) were recruited within 36 hours of the baseball game from Amazon's Mechanical Turk website and paid 25 cents for their participation. Nineteen (19) Yankees fans and 21 Red Sox fans participated in this study.

Materials and Procedures

All participants reported that they had watched the game on April 23rd, 2014. In order to assess the strength of their fan identification, participants were asked how long they had been a fan of their team (*"less than one year"*, *"less than five years"*, *"more than five years"*, *"more than ten years"*), how many games they typically watched in a season (*"1-5"*, *"6-10"*, *"more than 10"*), if they had ever been to their team's home stadium (*"Yes"* or *"No"*), how important being a fan of their team was to them (on a scale from 1 = *"unimportant"* to 7 = *"extremely important"*), and how much they disliked the rival team (on a scale from 1 = *"I don't dislike the Yankees/Red Sox"* to 7 = *"I extremely dislike the Yankees/Red Sox"*). In order to increase identification with their team prior to the memory task, participants were also asked recall their favorite memory related to being a fan of their team.

Following the fan identification task, participants were then asked a series of questions about the game on April 23rd, in which the Yankees pitcher used pine tar and broke the major league baseball rule. Questions included general inquiries about the game (e.g. where it was being played, who scored specific runs, what the score was during a specific inning, who the opening and closing pitchers were) and questions specifically related to the pine tar incident (i.e.

in what inning it occurred, where the pine tar was discovered), for 13 memory questions in total (see Appendix for study materials).

Following the memory questions, participants were asked a series of questions related to how they felt about the incident, including: 1) How negatively they felt about the event, 2) How upset and angry they were about the game, 3) How intentional the pitcher's behavior was, 4) How responsible they felt the pitcher was for his behavior, 5) How morally wrong they felt the behavior was, 6) How upset they were about the game, 7) How negatively they felt about the game, 8) How much blame they felt the pitcher deserved, and 9) Whether they felt that the rule banning pine tar should be changed. In order to see if feelings about the individual pitcher were different from feelings about the team, participants also completed the intentionality, responsibility, control, moral wrongness, and blame questions at the team level. All questions were evaluated on a seven-point scale from 1 (*Not at all*) to 7 (*Extremely*).

Results

Negativity and team affiliation. One participant reported using the Internet to look up the answers on the memory task, and was excluded from analysis. There were no differences on any measure of strength of fan identification across both teams. The measures of negativity, being upset, and anger about the event showed good internal consistency (Cronbach's $\alpha = .86$), and were summed and averaged to create a measure of negative reactivity. Unsurprisingly based on the outcome of the game, Yankees fans were significantly more negatively reactive ($M = 3.77$, $SD = 1.45$) than Red Sox fans ($M = 2.67$, $SD = 1.34$), $t(37) = 2.47$, $p < .05$.

Moral blame and memory accuracy. While the Yankees fans may have felt more negatively about the game, there were no differences in the pitcher's perceived moral wrongness between Yankees fans ($M = 4.58$, $SD = 1.71$) and Red Sox fans ($M = 4.15$, $SD = 1.95$), $t(37) = .73$,

$p > .40$, with both means above the midpoint, suggesting that fans of both teams felt that the action was morally wrong. In addition, there were no differences between Yankees fans ($M = 5.68$, $SD = 1.34$) and Red Sox fans ($M = 5.75$, $SD = 1.59$) on assessments of blameworthiness, $t(37) = .83$, $p > .80$, with both means above the midpoint. I performed two one-sample t-tests against the midpoint for both moral wrongness ($M = 4.36$, $SD = 1.83$), $t(38) = 1.22$, $p > .20$ and blameworthiness ($M = 5.72$, $SD = 1.45$), $t(38) = 7.40$, $p < .0005$. Taken together, this suggests that fans of both teams felt that the action was blameworthy and morally unacceptable.

In order to calculate memory accuracy, participants were given a score of “1” for every memory question that they answered correctly, and a score of “0” for every question answered incorrectly. These scores were summed and averaged, resulting in a percentage score for memory accuracy. For example, if a participant had gotten 8 out of the 13 memory questions correctly, he would have an overall memory accuracy score of 61%. There was a marginal relationship between blameworthiness and memory accuracy, $r(39) = .295$, $p = .07$ (for all correlations, see Table 1).

Intentionality and Memory Accuracy. As the results of study 5 indicate that perceived intentionality moderates the relationship between moral status and memory intensity, I predicted that as all participants felt that the behavior was morally blameworthy, they could be construed as moral patients, and thus that perceived intentionality would be predictive of memory accuracy independently of team affiliation. The measures of intentionality, responsibility, and control for both pitcher Michael Pineda and the New York Yankees showed good internal consistency (Cronbach’s alphas = .77 and .79) and were summed and averaged to create measures of Agent Intent and Team Intent, respectively. Regression analysis was used to test if perceived agent intentionality (Agent Intent) significantly predicted memory accuracy independently of team

affiliation. The results indicated that, when adjusting for team affiliation and time elapsed since the game, perceived agent intentionality significantly predicted overall memory accuracy ($b = .44$, $SE = .05$ $p < .01$). These results indicate that perceived agent intentionality for morally blameworthy behavior is linked to enhanced memory for moral events (for all correlations, see Table 1).

Discussion

In this study, participants who had observed a real-world moral transgression were asked to recall specific details about the event. The results indicate that perceived intentionality and moral blameworthiness play a role in memory accuracy, such that individuals who perceived Pineda's actions to be more intentional and more morally blameworthy had better memory for the event. Thus, the extent to which individuals imbued Pineda with agentic qualities impacted the extent to which the event was remembered accurately, suggesting that perceptions of moral agency may lead to increases in memory for moral events.

However, an alternative explanation of the results could be that individuals who were paying more attention to the game in the first place may also be those who were more likely to perceive Pineda's behavior as having been intentional. In order to be caught using pine tar, a pitcher needs to first put pine tar on his hands, an action that is perhaps less ambiguous with regard to intentionality and responsibility than other immoral actions that pitcher could perform (e.g. hitting a batter). Individuals who were more carefully watching the game could also have been those who would be more likely to identify the action as intentional. One way of exploring this explanation could be using a more malleable memory measure (e.g. recalled strikeouts or hits) and seeing if perceived intentionality leads to increased memory deviations. As mentioned earlier, Pizarro and colleagues (2006) found that perceived intentionality led to memory

distortions that made the agent's behavior more morally blameworthy. If intentionality is similarly impacting memory for the ballgame, we might expect that participants who viewed the behavior as more intentional might be more likely to think that Pineda benefitted more from his pine tar usage (by pitching more strikes or striking out more batters) than was actually the case. This type of memory measure would weaken the alternative explanation that increased attention leads to increased perceptions of intentionality. Future work should combine both objective and malleable measures of attention to more fully address this point.

Table 1. Intentionality and Memory (Study 6)

Variables	1	2	3	4	5	6	7	8	9	10
1. Team affiliation ⁶	-									
2. Rival dislike	.124	-								
3. Negative reactivity	-.376*	-.012	-							
4. Agent Intent	.213	.048	-.117	-						
5. Agent Blame	.023	.299	.158	.542**	-					
6. Agent Wrong	-.119	.207	.466*	.071	.416**	-				
7. Team Intent	.138	.164	.162	.199	.342*	.480**	-			
8. Team Blame	.171	.261	.037	.112	.278	.312	.692**	-		
9. Team Wrong	-.001	.122	.301	-.084	.199	.601**	.639**	.448**	-	
10. Memory Accuracy	.359*	-.017	.099	.500**	.295 [†]	-.063	-.081	-.242	-.173	-

⁶ Team affiliation was coded as Yankees = 1 and Red Sox = 2.

General Discussion

As these four studies potentially demonstrate, the relationship between negativity, intentionality, and memory is a complicated one. These results complement prior research showing that autobiographical recall is a motivated process. In one study, Bo Sanitioso & Niedenthal (2006) told half of participants that introversion was linked to academic success, and the other half was led to believe that introversion was linked to academic failure. All participants were then asked to recall five instances in which they had exhibited introverted tendencies. The researchers found that the recall task was significantly easier for participants that had been led to believe that introversion leads to success than individuals who had been told the opposite. Further, they found that this ease of recall mediated the relationship between condition (introvert-success, introvert-failure) and self-perception, as measured by the extent to which individuals reported that they were indeed introverted. Specifically, individuals who had been told that introversion was linked to failure recalled fewer introversion incidents and reported lower self-identification as an introvert.

A similar process may be partially underlying the results of study 3, in which participants reported that they were able to recall more events in which they had been a moral patient than events in which they had been a moral agent. Previous research has shown that individuals over-report desirable behaviors, and under-report undesirable ones (Ganster, Hennessy, & Luthans, 1983). In this case, moral agency may be viewed as a particularly undesirable behavior. While the motivation explanation may partially underlie the recall differences in this chapter, there is good reason to believe that it is not the full story. As you may recall in study 3, participants showed an order effect (see Figure 3) such that individuals who recalled being moral agents first recalled significantly fewer patient events than individuals who recalled being patients first. If

this effect were being driven by a motivation to maintain a positive self-image, we might expect the opposite result. A natural defensive mechanism to self-threatening information (i.e. “I am a person who has harmed people”) might be to think of even more times when one has been harmed. The data does not reflect this pattern, and suggests that self-enhancement might not be the only process at work here.

Studies 4 through 6 show that negativity and intentionality both make meaningful contributions to memory recall for moral events. In study 4, negativity was shown to mediate the relationship between moral status and the number of details recalled about the moral event. In study 5, the relationship between moral status and negativity was moderated by the extent to which the agent had acted intentionally, specifically, patients felt that intentional harms were significantly more negative than agents. Agent intentionality also moderated the relationship between moral status and memory recall, such that intentional behaviors led to greater memory intensity than accidental behaviors. In study 6, perceived intentionality was shown to impact memory accuracy for a real-world moral transgression. In this study, the extent to which a cheating baseball player’s behavior was viewed as intentional was linked to how well the details of the event were remembered.

Previous research has shown that social inferences function within a hierarchy (Malle & Holbrook, 2012). The researchers demonstrated that of 4 major inferences made when interpreting behavior (intentionality, desire, belief, and personality), intentionality and desire inferences occur first, followed by beliefs, and lastly personality. That intentionality inferences are made quickly is important, because when patients view agents doing bad things to them, they may be more likely to infer that this behavior is intentional (as doing bad things is typically diagnostic of being a bad person). Unless they have the motivational or cognitive resources to

engage in more processing, actions that were not particularly intentional may be categorized as more so. After all, agents don't always do bad things knowingly. For example, a grad student reading an article for her dissertation may be so engrossed that she might not even notice the very pregnant woman standing in front of her on the crowded subway train. To everyone around her, this act may look more intentional than the behavior actually was.

The studies in Chapter 4 show that memories for moral events in one's life are systematically and predictably biased. Individuals are better able to recall times that they were moral patients than when they were moral agents, this ease of recall is due to the increased negativity that goes along with being a moral patient, but that critically, this negativity is contingent upon whether the moral agent is perceived to have acted intentionally.

Chapter 4

Moral Memory and Psychological Completeness

In 1907, a child's bike was stolen from in front of a public library in Wilkes-Barre, Pennsylvania. This was by no means the first bike that has ever been stolen, and it won't be the last. However, this particular bike belonged to a little boy named Herman Mankiewicz, who never forgot about the theft, and would go on to use his stolen bicycle as the inspiration for a very famous sled called "Rosebud" (Meryman, 1978). Mankiewicz wrote the classic 1942 film "Citizen Kane", in which a journalist seeks to uncover the meaning behind "Rosebud", the famous last word of an enigmatic millionaire, Charles Foster Kane, on his deathbed. By the end of the film, viewers learn that Rosebud refers to a sled, and was meant to be a symbol for the only happy period in Kane's life, his childhood. What this anecdote illustrates is that moral patient events stick with us—whether it's stolen bikes, broken hearts, or bruised egos.

In the previous chapter, I showed that moral patient events are more negative than moral agent events, and that while this negativity leads to increased memory recall and intensity, it is moderated by the extent to which the moral agent acted intentionally. In this chapter, I examine another possible mechanism for these results: the Zeigarnik effect (Zeigarnik, 1935). This effect describes the tendency for uncompleted tasks to be better recalled than those that have been completed, due to a feeling of unresolved tension that is resolved once the task has been finished. In the studies below, I propose that negative moral events feel similarly incomplete, particularly for moral patients.

When events are negative, individuals spend more time thinking about the reasons for their occurrence. For example, research looking at memory for life events has shown that individuals remember more information when they lose as compared to when they win

(Gilovich, 1983). In one study, participants made a series of bets about NFL football games for the following week. A few days later (when the games had been completed) the participants returned to the lab to settle their bets and to record their thoughts on the games. A third session was completed a few weeks later, in which participants were called and asked to report what they recalled of the games that they had bet on. The results showed that participants recalled more details about games on which they had lost (by betting on the wrong team) than games in which they had won. In addition, individuals recalled their losses *before* they mentioned their wins, suggesting that losses may be easier to retrieve. This ease of recall was due, in part, to individuals spending an increased amount of time dwelling on the reasons for their losses as compared to the reasons for their wins. While most moral patient events are certainly worse than losing football bets, I propose that similar psychological processes underlie both experiences.

As mentioned in Chapter 1, individuals think about regrets of inaction more frequently than they think about regrets of action (Savitsky, Medvec, & Gilovich, 1997). Betting, regrets of inaction, and moral patiency have a surprising element in common: a perceived lack of control over an outcome. As agents both cause moral events to occur, and are responsible for making amends, they arguably have more situational control than do patients. In this chapter, I aim to show that one reason that moral patient events may be better recalled than moral agent events is due to the former's tendency to feel less psychologically complete than the latter, and that this psychological incompleteness is due to a lack of situational control.

This is not to say that moral patients are completely helpless—after all, individuals often seek and achieve a sense of closure after traumatic or negative events have occurred (Taylor, 1991; Gilbert, 2006). One way in which individuals may gain closure is by seeking amends or granting forgiveness. In study 7, I explore this possibility, and hypothesize that the extent to

which amends were made by the moral agent will impact feelings of psychological completeness. However, moral actions—particularly intentional ones—are the result of underlying causes. In study 8, I hypothesize that knowledge of the cause of moral events is one-sided with regard to the moral dyad, such that agents have more knowledge of the causes of the event, and this understanding of why the event occurred may lead to increased feelings of psychological completeness.

Study 7: Psychological Completeness and Amends

In the teen horror film “I Know What You Did Last Summer”, a group of college students are terrorized by a man whom they had run over with a car the preceding summer and had left for dead. This man proceeds to impale one of the teens with a fish hook and dispose of two of their bodies in a storage freezer. Grudges, as it turns out, can be a bit of a pain. They’re also eroding to one’s health—in one study, nursing a grudge following a hurtful event led to stronger negative emotions, and increases in heart rate, skin conductivity, and blood pressure (Witvliet, Ludwig, & Vander Laan, 2001).

However, one way that grudges can be significantly reduced is by attempting to make amends, and offering an apology (Darby & Schlencker, 1982). In one paper, Hannon and colleagues (2010) looked at a dyadic model of forgiveness in married partners following an act of betrayal. Similar to the moral dyad, one member of the couple was the perpetrator of the betraying act, and one member of the couple was the victim. In the first study, they found that when perpetrators made amends early on it was positively associated with victim forgiveness, suggesting that amends are crucial to the forgiveness process. In the second study, they found that both early perpetrator amends and subsequent victim forgiveness were associated with resolution of the betrayal event. Taken together, this paper suggests that both amends and

forgiveness strongly impact the extent to which a negative event between two people feels resolved.

In this study, I test the hypothesis that amends and forgiveness are also important factors in how individuals think about moral events from the perspective of the moral dyad. Specifically, I think that these two factors will be linked to how psychologically complete the moral event feels. I hypothesize that there will be a relationship between moral status (patient and agent) and psychological completeness; such that patients will feel that the event is less psychologically complete than will agents. I predict that this will be due to a significant difference between the extent to which patients feel like amends were made and the extent to which agents feel like amends were made. As shown in the previous chapter, patients feel that moral events are significantly more negative than agents, and are both easier to recall and more intense. As moral agents perceive the event to be less impactful, they may make fewer amends than patients think their behaviors merit. This may lead to a significant difference between patients and agents on the extent to which amends are perceived to have been made. I further predict that the extent to which amends were made will mediate the relationship between moral status and psychological completeness.

Method

100 participants (49 males, $M_{age}=32.4$, $SD_{age}=11.65$) were recruited from Amazon's Mechanical Turk website, and were paid 50 cents for their participation.

Materials and Procedures

As in the previous studies, participants were again given a brief explanation of the moral dyad and the same examples. Following these examples, participants were randomly assigned to

either the moral agent condition or the moral patient condition. The memory prompt was slightly different than the one used in the previous studies:

*“Take a moment and think about a time when you were a Moral Patient/Moral Agent, a time when the actions or intentions of another person led to you being harmed/a time when your actions or intentions led to someone else being harmed. We would like you to recall **a specific event** in which you were a **moral patient/moral agent**. Make sure that the event is **specific** (it happened at a **particular time and place**, lasted less than one **day**).”*

All participants were given at least a minute to think and write about their recalled event.

Following memory recollection, participants in both conditions were asked how long ago the event had occurred. Participants were also asked the following questions in randomized order:

1) How much of an impact the event had on their lives on a scale from 1 (*“The event has had very little impact”*) to 7 (*“The event has had considerable impact”*), 2) How negative the event was, on a scale from 1 (*“Not at all negative”*) to 7 (*“Extremely negative”*), and 3) How intentional the agent’s behavior was, on a scale from 1 (*“Not at all intentional”*) to 7 (*“Extremely intentional”*). In order to assess psychological completeness, participants were asked the following (adapted from Savitsky, Medvec, & Gilovich, 1997):

“To what extent does the event in which you were a moral patient/moral agent feel psychologically incomplete? That is, if the event were a story, how unfinished does the story feel to you?”

Participants responded on a scale from 1 (*“This event feels like unfinished business”*) to 7 (*“This event feels like a closed book”*). Following these questions, participants were also asked to indicate the extent to which the moral agent (or themselves) had attempted to make amends for

the event on a scale from 1 (“*No amends were made*”) to 7 (“*Full amends were made*”) and whether or not the moral patient (they) had forgiven the moral agent for the event by answering “*Yes*” or “*No*”.

Results

There was no difference in how much time had elapsed since the event between patients ($M = 3586.80$ days $SD = 6579.97$) and agents ($M = 5267.611$ days, $SD = 8487.79$), $t(98) = -1.09$, $p > .20$. There was a marginal difference between patients ($M = 3.71$, $SD = 1.99$) and agents ($M = 3.04$, $SD = 2.00$) on how much of an impact the event had on their lives, $t(98) = 1.693$, $p = .09$.

Negativity and intentionality. I replicated my previous findings, such that patients reported that the event was significantly more negative ($M = 5.70$, $SD = 1.33$) than agents ($M = 4.78$, $SD = 1.54$), $t(98) = 3.162$, $p < .01$. I also replicated the interaction between intentionality and moral status on negativity from Study 5 (this time with intentionality as a continuous variable), ($b = -.44$, $SE = .15$, $p < .01$). When participants view the behavior as intentional (1 SD above the mean), patients rated the event as significantly more negative than agents ($b = -1.68$, $SE = .40$, $p < .0005$). There was no effect of moral status on behaviors that were viewed as unintentional (1 SD below the mean).

Amends and Psychological Completeness. In line with my predictions, on the primary dependent variable of interest, psychological completeness, patients reported that the event was significantly less psychologically complete ($M = 4.57$, $SD = 2.03$) than agents ($M = 5.59$, $SD = 1.69$), $t(98) = -2.76$, $p < .01$. In addition, patients reported that amends had been made to a significantly lesser extent ($M = 2.00$, $SD = 1.69$) than agents ($M = 5.05$, $SD = 2.22$), $t(98) = -7.63$, $p < .0005$. In order to test the prediction that the extent to which amends were made

mediates the relationship between moral status (moral agency and patiency) and psychological completeness, I conducted a mediational analysis (Hayes, 2013). As seen in Figure 9, although moral status predicted both psychological completeness ($b = 1.03$, $SE = .37$, $p < .01$) and the extent to which amends were made ($b = 3.05$, $SE = .40$, $p < .0005$), the relationship between moral status and psychological completeness dropped to non-significance ($b = .45$, $SE = p > .30$) when controlling for differences in the extent to which amends were made. A bias-corrected bootstrap 95% CI indicated that the indirect effect through amends was significant, $a \times b = .58$, 95% CI: [.10, 1.34].⁷

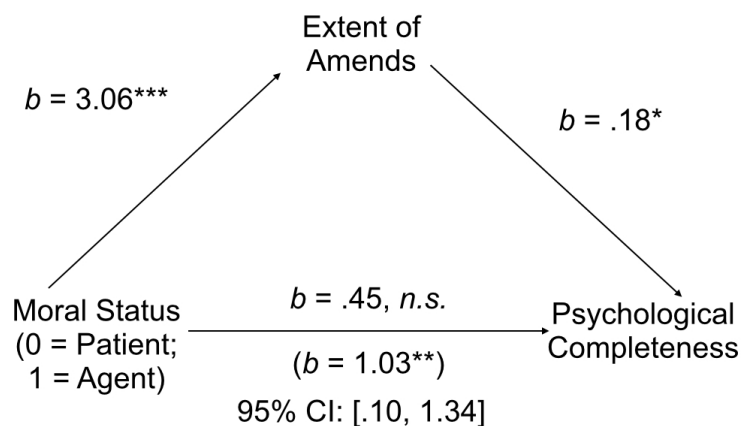


Figure 9. The extent to which amends were made mediates the relationship between moral status and psychological completeness.

Forgiveness. In addition, a significantly higher percentage of agents (46%) than patients (30%) recalled events in which forgiveness had occurred. $\chi^2(1,100) = 5.43$, $p < .05$. As predicted, there was a significant relationship between amends, forgiveness, and psychological completeness (see Table 2).

⁷ For reverse mediation model, see Figure 16 in the Appendix.

Table 2: Psychological completeness and forgiveness (Study 7).

Variables	1	2	3	4	5	6
1. Psych. Completeness	-					
2. Amends	.325**	-				
3. Forgiveness ⁸	.358**	.447**	-			
4. Impact	-.232*	.054	.051	-		
5. Agent Intent	-.157	-.450**	-.392**	.016	-	
6. Negativity	-.225*	-.037	.050	-.529**	.128	-

Discussion

The results of this study show that, as predicted, there is a significant difference in psychological completeness between moral patients and moral agents, such that patients report that the event feels more unfinished than moral agents. Further, I show that this effect is mediated by the extent to which amends were made. What is perhaps most intriguing about these results may be the discrepancy in perceived forgiveness between patients and agents. This is likely related to the substantial discrepancy between patients and agents with regard to amends having been attempted. While agents recall events for which they have made moderate amends, patients recall events in which minimal to no amends were made. There are at least three potential explanations for this asymmetry: 1) As patients are the ones actually doing the forgiving, agents may lack true insight into whether or not forgiveness has occurred, 2) As patients generally report moral events to be more negative, there may be differences in terms of what degree of amends would need to be made to fix the situation, and 3) There may be

⁸ Forgiveness was coded as Yes = 1 and No = 0.

differences in recall and retrieval, such that agents may be motivated to recall events in which they made amends and were forgiven, rather than events when they were not. In Study 8, I examine another potential contributor to psychological completeness, the extent to which causes for the event feel understood.

Study 8: Causes and Completeness

When unexpected events occur, individuals unsurprisingly find themselves asking “why?”—we can’t help but wonder why the thief wanted *our* bike, why that painful breakup had to occur the way it did, and why the schoolyard bully picks on us in particular. A vast amount of literature in social psychology has examined how we make attributions for the behavior of others and how we think about the causes of their actions (Heider & Simmel, 1944; Kelley, 1973; Helzer, 2012). Prior research has similarly focused on how we make causal attributions regarding our own behavior (Bem, 1967). Individuals are not always accurate when it comes to determining the origins of their behaviors, and may even take authorship for events in which they played no causal role (Nisbett & Wilson, 1977; Pronin et al., 2006).

This research suggests that determining the cause of another person’s—and sometimes even one’s own behavior—can be a difficult task. When it comes to moral events (i.e. those involving agents and patients) these attributions become very important when it comes to things like assessing moral character and responsibility. Across four studies, Pizarro and colleagues (2003) found that even when individuals intended to act immorally, caused the immoral event to occur, and the outcome was the planned one, moral blame was impacted by “causal deviance”, or unexpected changes in how intention and cause turn to outcome. As an example, consider the scenario below (from Pizarro, Uhlmann, & Bloom, 2003):

“Barbara wants to kill her husband, John. When they are eating at a restaurant, Barbara slips some poison into John’s dish while he isn’t looking. Unbeknownst to Barbara, the poison isn’t strong enough to kill her husband. However, it makes the dish taste so bad that John changes his order. When he receives his new order, it contains a food that John is extremely allergic to, and which kills him within minutes.”

In this scenario, the agent has both the intention to kill her husband, and performed an action that she believed would lead to this desired outcome, which it does, but perhaps not in the way that she was expecting. Participants are sensitive to this distinction, and assigned Barbara significantly less moral responsibility for her husband’s death when it occurred in this fashion than in a scenario when the poison killed him outright. This suggests that knowledge of the causes of moral events, and how they relate to outcomes is very important when making assessments of moral responsibility and blame.

In the study below, I hypothesize that knowledge of the causes of moral events is also important when it comes to feeling like an event is psychologically complete. When we know *why* an event occurred, it provides a degree of understanding of the event that allows individuals to gain some sense of psychological closure. I further hypothesize that knowledge of causes will be one-sided with regard to the moral dyad, in particular, that agents will report that they have more insight into the causes of the event, and that this causal knowledge will lead to an increased feeling of psychological completeness. This prediction is somewhat complicated by the results of the prior study, which showed that amends mediate the relationship between moral status and psychological completeness. With this in mind I propose a model in which moral status’s effect on psychological completeness is mediated through both amends and causes, working in parallel (Figure 10).

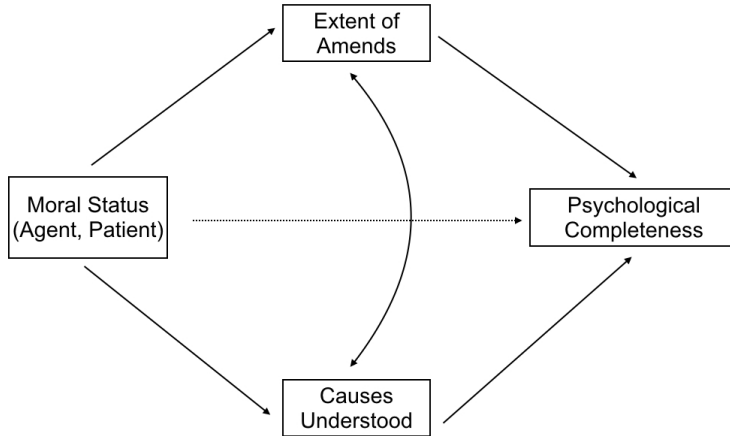


Figure 10. Model of the proposed relationship between moral status and psychological completeness, with the extent to which amends were made and the extent to which causes were understood serving as mediators operating in parallel.

Method

Participants

99 participants (60 males, $M_{age} = 29.10$, $SD_{age} = 8.49$) were recruited from Amazon's Mechanical Turk website, and were paid 50 cents for their participation.

Materials and Methods

As in the previous studies, participants were given a brief explanation of the moral dyad and the same examples. Following these examples, participants were randomly assigned to either the moral agent condition or the moral patient condition. Participants were then shown the memory prompt used in Study 7 in which they recalled a specific moral agent or patient event. As in the previous study, all participants were given at least a minute to think and write about his or her recalled event.

Following memory recollection, participants in both conditions were asked how long ago the event had occurred. Participants were also asked the following questions in randomized order: 1) How much of an impact the event had on their lives on a scale from 1 (*“The event has had very little impact”*) to 7 (*“The event has had considerable impact”*), 2) How negative the event was, on a scale from 1 (*“Not at all negative”*) to 7(*“Extremely negative”*), 3) How intentional the agent’s behavior was, on a scale from 1 (*“Not at all intentional”*) to 7(*“Extremely intentional”*), and 4) The psychological completeness measure from Study 7, on a scale from 1 (*“This event feels like unfinished business”*) to 7(*“This event feels like a closed book”*). Following this, participants also were asked the following questions in order assess the extent to which they understood the causes of the event:

“To what extent do you feel like you understand the causes of this event? That is, how much do you feel that you understand why the event happened and the reasons for its occurrence?”

Participants responded on a scale from 1 (*“I do not understand the causes of this event at all”*) to 7(*“I fully understand the causes of this event”*).

To assess the extent to which they understood the consequences of the event, participants were asked the following:

“To what extent do you feel like you understand the consequences of this event? That is, how much do you feel that you understand how the event played out and the results of its occurrence?”

Participants responded on a scale from 1 (*“I do not understand the consequences of this event at all”*) to 7(*“I fully understand the consequences of this event”*).

Following these questions, participants were also asked to indicate the extent to which the moral agent (or themselves, if they were in the agent condition) had attempted to make amends for the event on a scale from 1 (“*No amends were made*”) to 7 (“*Full amends were made*”) and whether or not the moral patient (they) had forgiven the moral agent for the event by answering “*Yes*” or “*No*”.

Results

There was no difference in how much time had elapsed (in days) since the event between patients ($M = 3706.85$ days, $SD = 4672.55$) and agents ($M = 5346.70$ days, $SD = 7904.47$), $t(97) = -1.27$, $p > .20$. There was a significant difference between patients ($M = 3.90$, $SD = 2.00$) and agents ($M = 3.00$, $SD = 1.67$) on how much of an impact the event had on their lives, $t(97) = 2.43$, $p < .05$.

Negativity and Intentionality. Unlike in prior studies, I did not find a difference in reported negativity for the event, such that patients did not report that the event was significantly more negative ($M = 5.19$, $SD = 1.65$) than agents ($M = 4.72$, $SD = 1.66$), $t(97) = 1.41$, $p = .16$, though there is evidence of a trend in the direction consistent with previous studies. I replicated the interaction between intentionality and negativity from Studies 5 and 7, ($b = -.61$, $SE = .16$, $p < .0005$). When participants view the behavior as intentional (1 SD above the mean), patients rated the event as significantly more negative than agents ($b = -1.28$, $SE = .42$, $p < .01$). Unexpectedly there was also an effect of moral status on behaviors that were viewed as unintentional (1 SD below the mean), such that agents report unintentional behaviors as being less negative than patients ($b = 1.20$, $SE = .48$, $p < .05$).

Causality and Psychological Completeness. In line with my predictions, on the primary dependent variable of interest, causality, patients reported that they understood the causes of the

event significantly less ($M = 4.54, SD = 2.09$) than agents ($M = 5.98, SD = 1.33$), $t(97) = -4.04$, $p < .0005$. There were no differences in how much patients reported understanding the consequences of the event ($M = 5.67, SD = 1.26$) than did agents ($M = 5.98, SD = 1.33$), $t(97) = -1.17$, $p > .20$. I also again found that patients reported that the moral agent made significantly less attempts to make amends ($M = 2.85, SD = 2.16$) than agents reported making ($M = 4.47, SD = 2.46$), $t(97) = -3.41$, $p < .01$. There was also a significant correlation between the extent to which causes are understood and the extent to which amends were made, $r(99) = .30$, $p < .01$. In order to test the prediction that the extent to which causes are understood mediates the relationship between condition (moral agency and patiency) and psychological completeness, I conducted a mediational analysis (Hayes, 2013). As seen in Figure 11, although condition predicted both psychological completeness ($b = .991, SE = .40$, $p < .05$) and the extent to which causes were understood ($b = 1.44, SE = .36$, $p < .001$), the relationship between condition and psychological completeness dropped to non-significance ($b = .28, SE = .38$, $p = .47$) when controlling for differences in the extent to which amends were made. A bias-corrected bootstrap 95% CI indicated that the indirect effect through understanding of causes was significant, $a \times b = .72$, 95% CI: [.28, 1.4].⁹

⁹ For reverse mediation model, see Figure 17 in the Appendix.

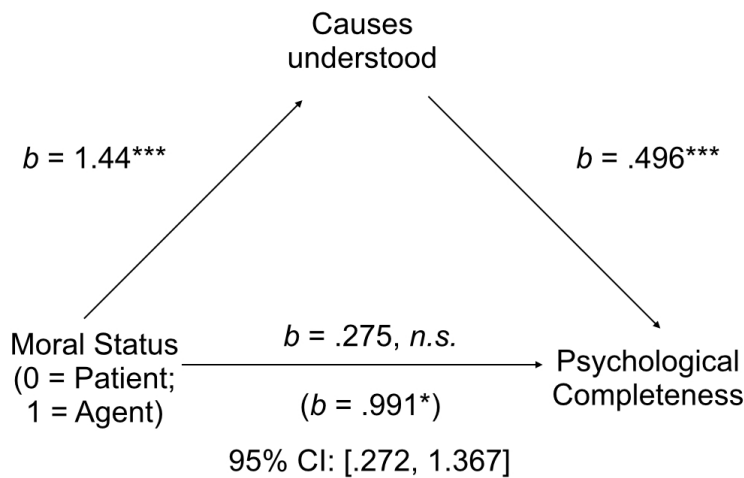


Figure 11. The extent to which causes feel understood mediates the relationship between moral status and psychological completeness.

Forgiveness. The forgiveness results from study 7 also replicated, such that a significantly higher percentage of agents (87%) than patients (51%) recalled events in which forgiveness had occurred, $\chi^2(1,99)=14.33$, $p < .0001$.

Testing the proposed model. I ran a structural equation model examining the effect of moral status on psychological completeness through two mediators: the extent to which amends were made and the extent to which causes were understood. As seen in Figure 12, there was significant effect of moral status on the extent to which amends were made ($b = 1.58$, $SE=.46$, $p < .005$) and a marginal effect of amends on psychological completeness ($b = .14$, $SE=.08$, $p = .06$). A bias-corrected bootstrap 95% CI indicated that the indirect effect of moral status on psychological completeness through amends was significant, $a \times b = .236$, 95% CI: [.029, 1.42]. There was also a significant effect of moral status on the extent to which causes were understood ($b = 1.44$, $SE=.35$, $p < .005$) and of causes on psychological completeness ($b = .45$, $SE=.13$, $p < .005$). In addition, there was also a relationship between amends and causes ($b = .81$, $SE = .35$, p

< .05). A bias-corrected bootstrap 95% CI indicated that the indirect effect of moral status on psychological completeness through the extent to which causes were understood was significant, $a \times b = .642$, 95% CI: [.231, 1.20]. As predicted, while the effect of moral status on psychological completeness was initially significant ($b = .991$, $SE = .40$, $p < .05$), after adjusting for amends and causes as mediating variables, the effect of condition on completeness dropped to non-significance ($b = .06$, $SE = .38$, $p > .80$). A bias-corrected bootstrap 95% CI indicated that the sum of the indirect effects through the extent to which amends were made and causes were understood was significant, $a \times b = .226$, 95% CI: [.411, 1.42].

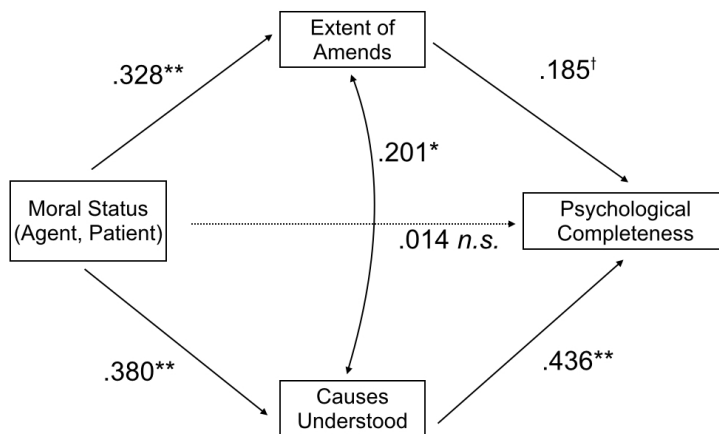


Figure 12. Structural equation model examining the effect of moral status on psychological completeness through two mediators, the extent to which amends were made and the extent to which causes were understood (Note: Figure displays standardized betas).

General Discussion

This chapter focused on the nature of the relationship between moral status on psychological completeness. In both studies, participants recalled either an event in which they had been a moral agent or a moral patient. As predicted, individuals who recalled times that they

had been moral patients indicated that the event felt more psychologically incomplete than individuals who recalled times that they had been moral agents. In study 7, the effect of moral status on psychological completeness was mediated by the extent to which amends were made. The goal of this study was to explore how a post-event factor (in this case, amends) impacted how agents and patients felt and thought about the moral event. The data from study 7 shows that the extent to which amends are made can powerfully influence both the likelihood of forgiveness and how individuals think about moral events in their lives.

Study 8 built on these results, and focused on the relationship of moral status on psychological completeness through two mediators operating in parallel: 1) the extent to which amends were made and 2) the extent to which causes of the event were understood. As agents have more insight into the underlying causes for their actions, and as moral agent's actions are the catalysts for moral events, I hypothesized and found that participants who had recalled moral agent events indicated that they felt that they understood the causes behind the event significantly more than individuals who had recalled moral patient events. I proposed and tested a model wherein both amends and causes mediated the relationship of moral status on psychological completeness.

The data indicate that the more that causes feel like they are understood and the more that amends are attempted to be made, the more psychologically complete moral events feel. As agents tend to both know the causes of moral events and control the extent to which amends are made, it is therefore unsurprising that they feel that events are more psychologically complete than moral patients do. For moral patients, who wonder about the causes and have to wait for an apology, these events may feel like an unfinished book—or perhaps, an un-ridden bicycle.

Chapter 5

General Discussion

In Hinduism, there is a fable about six blind men who encounter an elephant. As each man feels a different part of the elephant, he cries out what he thinks the elephant is like. The man feeling the tusk claims that the elephant is a spear, and the man feeling the elephant's leg loudly disagrees, and instead says that the elephant is a pillar¹⁰. The story is meant to illustrate that while both men were equally right—an elephant can feel like both a pillar and a spear—they were also equally wrong, as neither of those things are actually an elephant. Much like the men in the fable, moral agents and moral patients are limited to their own perspective when evaluating moral events in their lives. And thus, unsurprisingly, they run into the same problem—they are both equally right about what occurred from their perspective, but are perhaps equally wrong about the event as a whole.

As the research presented above suggests, personal agency plays an important role in the perception of moral events. In Chapter 2, I showed that individuals tend to construe moral events at a higher level than non-moral events (study 1), but that this tendency is significantly reduced when they have performed the immoral act themselves (study 2). In these studies, participants identified immoral actions at either a higher (more abstract) level or at a lower (more concrete) level. In the first study, participants were presented with both immoral and non-moral behaviors, and were asked to indicate whether the high level or low level identification best described the actions. As predicted, participants indicated that high level identifications were better descriptors of immoral behaviors than of non-moral behaviors. In study 2, participants again selected whether a high or low level identification best described immoral behaviors, but this time, they

¹⁰ For interested parties: The other four men claimed that the elephant was like a mud wall (for the skin), a serpent (for the trunk), a rope (for the tail) and a fan (for the ear).

also reported whether they had performed the act themselves. Prior agency was an important factor in action identification; such that individuals who had enacted the immoral behavior themselves were more likely to categorize it at a low level than those who had not. One reason for this pattern may be that identifying the action at a low level reduces the amount of valence and meaning associated with the immoral action. Immoral actions tend to be undesirable for those who have completed them, and one way that the negative emotions elicited by the performance of these actions may be dampened is by representing the action at a lower level, one that minimizes the evocation of moral standards.

While a great deal of recent work in moral psychology has focused on the moral dyad (Gray & Wegner, 2009; Gray, Waytz, & Young, 2012; Gray, Young, & Waytz, 2012; Gray & Wegner, 2010), the research presented here is the first to show that theoretical predictions about the nature of the dyad play out in real-world moral situations. When moral events are split into those who do the harming (agents) and those who are harmed (patients) consistent memory effects emerge, such that moral patient memories are both more negative and more intense than moral agent memories.

Chapter 3 focused on memory differences between agents and patients by having participants recall specific times in their lives when they have been in either moral role. In Study 3, the results show that individuals can recall more autobiographical patient events than agent events. One reason for this may be that moral patient events are more emotionally negative than moral agent events. In Study 4, participants again recalled an event in which they were either an agent or a patient, assessed how negative the event was, and reported how many sensory details they could recall from the event. Patients recalled events that were more negative than those recalled by agents. Further, event negativity mediated the relationship between moral status

(agent/patient) and the number of sensory details recalled. Studies 5 and 6 expanded upon these results, and focused on the role that agent intentionality plays in both event negativity and memory recall. As previous research has shown that intentional harms are more painful than unintentional harms (Gray & Wegner, 2008) and study 4 showed that negativity leads to better memory for moral events, I predicted that agent intentionality would influence the relationship between moral status and memory intensity. In study 5, participants recalled an event in which they were either an agent or a patient, and the agent (or themselves) had acted intentionally or accidentally. As predicted, agent intentionality moderated the relationship between moral status and negativity, and moral status and memory intensity. Study 6 took this effect to the ballpark, and showed that when a pitcher was caught cheating in an actual major league game, the extent to which he was believed to have acted intentionally was associated with more accurate memory for the details of the game.

Chapters 2 and 3 show that personal agency impacts both how moral events are perceived, and how they are recalled. Chapter 4 explored a possible mechanism behind these effects: psychological completeness. As agents are more in control of the moral events occurrence and of the extent to which amends are made, I predicted that agents would feel that the event was more psychologically complete, or finished, than would moral patients. In study 7, participants again recalled an event in which they had been an agent or a patient, and also reported the extent to which the event felt psychologically complete, or closed. In addition, participants also reported the extent to which the agent (or themselves) had attempted to make amends for their behavior, and whether or not forgiveness had occurred. As hypothesized, agents reported that the event was significantly more psychologically complete than did patients, and this effect was mediated by the extent to which amends were made. Study 8 expanded upon these

results, and showed that psychological completeness is mediated by the extent to which events were made and the extent to which causes are understood, operating in parallel. Taken together, these results suggest that an elephant is a heavy burden to carry, and it seems that patients are perhaps given the heavier psychological load.

Do patients actually have a better memory for moral events?

As summarized above, patient events are easier to recall than agent events, and are consistently reported to be both more negative and more intense than recalled agent events. However, if patients are more accurate in their memories for the events remains unknown. This speaks to a larger limitation and shortcoming of the studies above, specifically, that they are not working within a “closed system.” That is, the individuals who are recalling patient memories and the individuals who are recalling agent memories are likely not recalling the same events. This makes the accuracy of the recalled memories difficult to ascertain. Study 6 included a measure of overall memory accuracy, and showed that individuals who thought that the cheating pitcher (conceptualized as the moral agent) had acted more intentionally also had more accurate recall for the details of the baseball game. However, whether these individuals could really be considered “patients” is certainly up for debate. In addition, this study doesn’t include a measure of agent memory (as getting Michael Pineda to participate in a study about his cheating would likely be very difficult, and would result in a sample size of 1 in the agent condition).

Even within a closed system, memory accuracy for autobiographical events is remarkably difficult to determine, as memories can be changed and impacted by a variety of factors, including the words used to guide retrieval (Loftus & Palmer, 1974), whether or not more information is known about the situation in the present than was known in the past (Levine & Safer, 2002), and the goals and beliefs of the person in the present (Holland & Kensinger,

2011). For example, in one study, Safer and colleagues (2002) had students rate their test anxiety before a midterm exam and then recall their feelings one week later. The researchers found that how the student had performed on the test influenced memory for their pre-test anxiety, such that participants who had performed well on the exam (B and above) underestimated their pre-exam anxiety, whereas those who had performed poorly (B- and below) overestimated their pre-exam anxiety. Taken together, this suggests that there is something important to be gained in terms of understanding how individuals construct their life narrative by examining how they do it (McAdams et al., 2008), and not necessarily if it reflects reality.

One possibility is that agents and patients do not necessarily recall the same details from the events. As shown in studies 4 and 5, patients are able to recall more sensory details and report that the memory is more intense than agents. However, sensory information and intensity could both be considered within the realm of “conscious experience”, a quality that defines patiency more than agency (Gray and Wegner, 2009). It may be that agents may remember more details about the mechanics of the event itself (what words were said, physical movements that were made). The results of study 2 are consistent with this hypothesis, as they show that moral agents are more likely to represent their immoral actions at a concrete or lower level. We thus might expect agents to have better recall for the concrete details of the event, and patients to have better recall for the event’s affective qualities.

One limitation of the research above, is that the studies were run using Amazon’s Mechanical Turk website, which allows for a more diverse study population, but makes it difficult to test these ideas within a closed system. Future work should examine the agent/patient dyad within a laboratory context in which agents and patients are recalling and perceiving the same moral event (e.g. an economic game or social rejection task), in order to explore whether

the effect of moral status on autobiographical memory is reflective of real biases in moral event memory. A more naturalistic way of approaching this issue would be to have individuals in pre-existing dyads (e.g. siblings, romantic relationship partners) recall moral events like arguments or fights, in order to examine if the biases observed above emerge when individuals are recalling the same autobiographical event.

Could patients have a worse memory for moral events?

The research above indicates that patients recall events that are more negative and more intense than moral agents. Prior work has shown that emotional memories have a heightened sense of recollection, meaning that individuals hold very vivid memories for emotional experiences, and they feel very confident in these memories—even if the accuracy of these memories don't match the confidence associated with their recall (Phelps & Sharot, 2008). There seems to be a rather large dissociation between *belief* that the memory is accurate and actual accuracy of the recalled memory (Sharot, Delgado, & Phelps, 2004; Sharot, Martorella, Delgado, & Phelps, 2007). Some have found that aversive memories are less accurate, due to extreme emotion's disruption of encoding (Kihlstrom, Beer, & Klein, 2003). Thus, while a patient may feel more confident in his or her memory due to its intensity, that does not necessarily mean that the memory is more accurate than the agent's memory for the same event.

Why are agent events more difficult to recall?

In order to preserve a positive sense of self, individuals may engage in self-deception, or a motivated avoidance of negative information about the self. Over time, this leads to memory repression, or the development of a motivated inaccessibility for unpleasant or aversive memories or cognitions (Baumeister & Cairns, 1992). By failing to make associations between unpleasant events and pre-existing memory or knowledge networks, these negative events are

isolated, which reduces their likelihood of being attached to cues that could elicit memory recall (Hansen & Hansen, 1988). In addition, individuals engage in self-deception in order to ignore negative feedback while attending to positive feedback (Taylor and Brown, 1988). Individuals want to maintain their self-esteem, and isolating events in which they were a negative moral agent may be in the service of that goal.

Though individuals often may consider themselves to be a certain way (e.g. smart, kind, funny), this sense of identity does not ring completely true until others have acknowledged it to be the case, in this way individuals gain a sense of identity via *social reality* (Gollwitzer & Wicklund, 1985). Thus, in order to achieve a sense of positive moral identity (e.g. that one is not a moral agent) an individual tells a narrative that leads others to recognize and endorse traits that he or she believes that they have (Baumeister & Newman, 1994). In the work presented above, I show that individuals may unknowingly construct these types of self-serving narratives for themselves, through biased memory processes that lead to diminished retrieval for moral agent events. However, while self-serving biases are undeniably involved, they are only part of the story. In study 3, participants recalled significantly fewer moral agent events than moral patient events over the same six-month time period. This *may* reflect a self-enhancement motivation—individuals want to see themselves as good people, and good people don't tend to be agents for negative moral events. However the order effect observed in study 3 suggests that this is not the only process at work in this effect.

Shouldn't agents feel pretty bad?

As moral agents harm others, one might expect them to be wracked with guilt about their wrongdoings (Smith & Scherer, 1985). However, in the studies above, I find that agents report that moral events are less negative than do moral patients, and feel more psychological closure

for the event. However, this may not always be the case. Prior research (McGraw, 1987) showed that individuals experience more guilt when they have caused accidental harms as compared to intentional harms. In this study, participants were assigned to one condition of a 3 (role: harmdoer, victim, observer) x 4 (level of responsibility: accidental unforeseeable harm, accidental foreseeable harm, unjustified intentional harm, justified harm, and intentional harm). The researcher found that harmdoers assigned more responsibility to themselves than did the victim or observer, and that harmdoers reported feeling higher levels of guilt than victims or observers predicted that they would feel. Further, they found that harmdoers reported the most guilt when the harm had occurred accidentally than when it had occurred intentionally.

The results of the studies above are inconclusive with regard to this question. In study 5, individuals were asked to recall events that in which they were either an agent or patient in a situation in which the agent (or themselves) had acted intentionally or accidentally. There was a significant interaction of moral status by intentionality, such that patients felt that the behavior was much more negative than did agents when the action was intentional, but that there was no difference between patients and agents when the action was accidental. If harmdoers feel worse about accidental behaviors than do victims (as suggested by the McGraw study) then we might expect agents to have reported that accidental harms were more negative than would patients.

The results of study 7 are perhaps the best able to address this question. In this study, individuals recalled patient or agent events, and this time gave a continuous measure of both intentionality and negativity. When participants viewed the behavior as intentional (1 SD above the mean), patients rated the event as significant more negative than agents ($b = -1.28$, $SE = .42$, $p < .01$). There was also an effect of moral status on behaviors that were viewed as unintentional

(1 SD below the mean), such that agents report unintentional behaviors as being less negative than patients ($b = 1.20$, $SE = .48$, $p < .05$) (Figure 12).

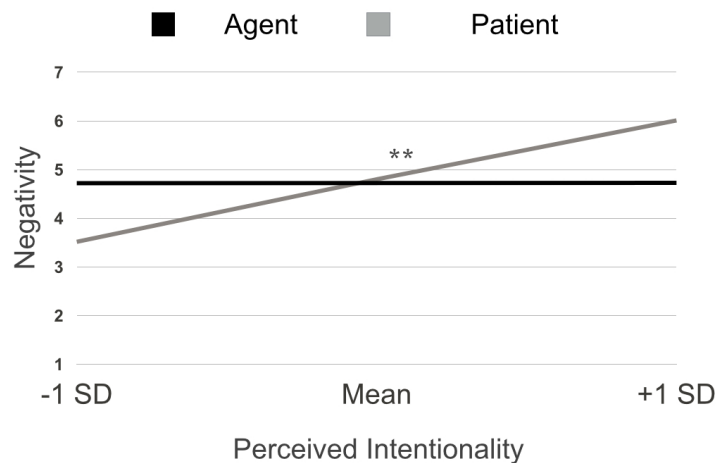


Figure 13. Perceived intentionality moderates the effect of moral status on event negativity.

These results indicate that agents think that the event is more negative than patients when the action was less intentional, but that this is not the case when the action is perceived as more intentional. While these results—paired together with those of study 5—are inconclusive in terms of the guilt that agents may feel, they underscore the idea that accidental behaviors are perhaps a different moral animal than intentional ones. While the reasons behind this effect are currently unclear, they may be due to a variety of factors. The methodology used in the studies above ask about the negativity of the event itself, and does not directly ask about guilt or post-event feelings. It could be that discrepancies in the negativity of accidental moral events between harmdoers/victims (or agent/patient) arise in feelings that occur post-event. The event itself may be very negative (after all, a car that hits you accidentally still hurts a great deal), but the negative emotions following the event may be quite different if the action was accidental.

In addition, agents and patients may use different rules to determine moral blame when an action is accidental or intentional. As I have shown across multiple studies, patients report

that intentional actions are more negative than do agents. It could be that patients may rely on degree of intent as a heuristic for assigning moral blame, whereas agents may instead use the degree to which the outcome was unexpected. When an agent intentionally harms someone, they do so with a general prediction about how negative the outcome will be. However, when the action is accidental, this potentially creates a prediction error, such that the outcome is very different from what agents expected. This difference in outcome may lead to more guilt or negativity associated with accidental moral harms. Future work should focus more on the role of prediction error in the assessment of event negativity and moral harm.

Are there more patients than agents?

Another consideration might be that the results of study 3 are not indicative of any sort of self-deception at all—it's entirely possible that there are fewer moral agents than moral patients. We can think of a multitude of examples where this might be the case: the Sandusky example mentioned in chapter 2, the Bernie Madoff case, any act of genocide. If we are willing to take a more abstract view of what constitutes a dyad, then we wouldn't necessarily expect an even number of patients and agents. However, these explanations are probably unlikely for the data collected above, as we had participants report a word associated with the event, and by and large most involved acts that would largely function dyadically (e.g. "stealing", "breakup", "fight").

That said, this does not disqualify the larger point—individuals have a very good sense of when they were harmed, but may have less insight into when they harmed others. Another factor that may lead to a number discrepancy between agency and patiency may be how agents conceptualize their actions in terms of number harmed. For example, if one were to ask Jerry Sandusky about the events that transpired, he might only acknowledge the superordinate immoral action (child molestation) and not the number of people that had been harmed by his

actions. This is partially because it is difficult to determine where to draw the line on who counts as a patient—undeniably all of the children harmed by Sandusky, but what about the football players who had their season cancelled? Or the Penn State fans and alumni who had their school's reputation tarnished? In this case, the agent (Sandusky) might only be identifying one action, but that action impacted a number of different people in a multitude of different ways. In addition, agents may have less awareness about times that they have harmed others. There are a number of reasons to think that this might be the case, among them that high power individuals are both less cognizant of others' emotions and experience less emotional reactivity (Galinsky, Magee, Inesi & Gruenfeld, 2006), and (as shown in chapter 2) when individuals have performed an immoral action themselves they are more likely to identify it at a lower level than if they hadn't performed the action. Both of these factors may contribute to moral disengagement on the part of the moral agent, and perhaps a lack of awareness that a moral event even occurred.

Could patients and agents be recalling different types of events?

As shown in chapters 3 and 4, moral patient events are easier to recall than moral agent events and are considered to be less psychologically complete. While I have focused on differences in recalled negativity between these two types of events, and knowledge of factors like causes and amends, left unexamined is the content of these memories. Two questions arise: 1) are there differences between patients and agents in the emotional content of the recalled memories, and 2) are there differences between patients and agents in event severity? It could be that patients are recalling more emotional memories than are agents (differences in reported negativity would suggest that this is the case), and that agents are recalling more minor moral events than are patients.

Emotional content of recalled memories

To examine the effect of moral status on emotional content, the recalled memories from studies 7 and 8 were submitted to Linguistic Inquiry and Word Count (LIWC2007) content analysis (Pennebaker et al., 2007). LIWC counts the number of words used in a text sample that belong to different psychological categories (e.g. self-referential words, words that refer to positive emotions, words that refer to negative emotions), and reports these counts as a percentage of the total words used. That is, if 20 out of 200 words used in a recalled memory referred to negative emotion, the text would be given a score of 10 on the negative emotion dimension. Studies 7 and 8 were used because the memory prompts asked participants to write short responses, whereas in studies 3-5, participants only reported one or two words associated with the recalled event.

In study 7, there was a marginal correlation between reported event negativity and the proportion of negative emotion words used across both conditions (agent and patient), $r(100) = .18$, $p = .07$; however this was not the case in Study 8, $r(98) = .03$, $p > .70$. There was no difference between patients and agents in proportion of negative words used in study 7 ($p > .40$) or in study 8 ($p > .60$). While there was a significant difference between patients ($M = 1.03$, $SD = 1.43$) and agents ($M = 1.90$, $SD = 2.45$), $t(98) = -2.12$, $p < .05$ in the number of *positive* words used, this was not the case in study 8 ($p > .70$). Taken together, these results are inconclusive with regard to answering the first question. While the data from study 7 is suggestive of a relationship between reported negativity and negative word content, this was not the case for study 8. In addition, there was no relationship between moral status and negative emotion words used. While there is perhaps an intriguing relationship between moral agency and

the number of *positive* emotion words used, this effect was not found across both studies. The inconsistency across studies may be due to the marginally larger responses elicited in study 7 ($M=47.95$, $SD = 26.98$) as compared to study 8 ($M=41.29$, $SD = 21.87$), $t(197) = 1.91$, $p = .06$). Thus, while it seems that reported negativity might be related to the use of negative words, there do not appear to be consistent content differences between patients and agents in the use of negative words when recalling moral events.

Differences in event severity of recalled memories

It's possible that agents may be recalling more minor events than patients, and that it is this discrepancy in event severity that is driving the difference in recall and reported completeness. In study 4, I showed that recalled patient memories are reported as being more negative than recalled agent memories—this could be due to a tendency for moral agent memories to be about less severe moral transgressions. If this is the case, it could be a reflection of a self-serving bias—when individuals are recalling times when they have harmed others, it might be less threatening to think about relatively minor harms. However, the results in chapter 2 complicate this prediction. Once an immoral action has been performed, it is identified at a lower level. This potentially means that patients and agents could recall the same type of event (e.g. cheating), and describe it in ways that may differ in severity. Thus the event could be equally severe in identity, but not in description. Future work using content analysis will investigate whether there are systematic differences in the severity of the events recalled by patients and agents, and if the difference lies in the action itself, or in the description of the action.

Negativity by any other name

It's also possible that patients and agents may be conceptualizing negativity differently. Patients arguably have more access to what occurred after the event, and likely have more

residual negativity about the outcome of the event than do agents. Thus, when patients are asked about the negativity of the event, they may be incorporating post-event information to a greater extent than are agents. In contrast, when agents are considering event negativity, they may instead only be focusing on the outcome of the event, and not any residual negativity that the patient may have experienced. This is, of course, speculative, but future work should examine if patients and agents are using the same time point when evaluating negativity of the event. If patients and agents are using different sources of information when arriving at their negativity assessments, this could complicate negativity's role as a mediator in the effect of moral status on memory.

Valence and arousal

A large limitation of the studies above is that they do not attempt to disentangle the roles of valence and arousal in the effect of moral status on autobiographical memory recall. While five of the studies measure event negativity, this term is a vague one—agents and patients may not only be recalling different things when arriving at their negativity assessments, but negativity as a concept potentially conflates the emotional dimensions of valence and arousal. Prior work has shown that it is arousal, and not valence, that facilitates memory retrieval (Talarico, LaBar, & Rubin, 2004; Bradley, Greenwald, Petry, & Lang, 1992). Further, negative valence can lead to the increased creation of false memories when arousal is held constant (Brainerd, Stein, Silveira, Rohenkohl, & Reyna, 2008).

It is possible that moral agents and moral patients may have different neural and physiological responses to the emotion-eliciting moral events, and that these responses may lead to the memory being better (or worse) recollected. Prior research in animals and humans has shown that highly emotionally arousing events lead to the release of adrenal stress hormones in

the amygdala, which facilitates memory consolidation (McGaugh & Roozendahl, 2002).

Amygdala activation has also been shown to play an important role in both fear acquisition and fear extinction. Fear acquisition is linked to an increase in amygdala activation when a participant is presented with the conditioned stimulus, and a decrease in amygdala activation coupled with increased vmPFC activation when the conditioned response has been extinguished (Phelps, Delgado, Nearing, & LeDoux, 2004).

It's possible that individuals who have been harmed (patients) experience more negative emotion and arousal during the moral event, leading to increased stress hormone production and amygdala activation. These may facilitate memory consolidation, leading to a more vivid recollection of moral patient events (compared to moral agent events) and increased amygdala activation or stress response upon recollection. Future work should examine neural and physiological differences between agents and patients when recalling the same moral event in order to get a better sense of the mechanisms underlying memory discrepancies between patients and agents.

Applying social psychological theory to autobiographical memory

This research examined two theories in social psychology, action identification theory and dyadic morality, within the context of how individuals think about and remember moral events in their own lives. While previous work in action identification theory had made predictions about how experience performing an action may shape construal (Vallacher & Wegner, 2012), this research is the first to show intra-individual differences in action identification based on prior experience performing the action. Further, it builds on prior research showing that action construal is a motivated process (Maass et al., 1989), but extends this to the domain of the self.

While a great deal of recent research in moral psychology has focused on the moral dyad and mind perception as fundamental elements comprising human morality (Gray, Waytz, & Young, 2012), the majority of this research has focused on the evaluation of hypothetical scenarios that manipulate perceived agency or patiency by presenting participants with individuals that diverge in the two dimensions of mind perception. The previous work in mind perception has examined the extent to which we perceive agency and patiency in the evaluations of others, and how these dimensions can be shifted based on their moral behaviors (Gray, Gray, & Wegner, 2007; Gray & Wegner, 2009). This research is the first to demonstrate that the agent/patient dyad can be applied to autobiographical moral events, and that the extent to which we perceive the qualities inherent in agency (i.e. the capacity to form intentions and act upon them) and patiency (i.e. the capacity to experience pain and suffering) in ourselves is dependent upon our role in the moral events that we have experienced.

Conclusion

Across eight studies, I have shown that the amount of agency that a person has in a moral event leads to predictable biases in how the event is perceived and recalled. These biases are the product of cognitive and motivational factors, which together lead to notable discrepancies in the recalled memories of those who did the harming and those who were harmed. Our recalled moral lives, instead of being perfect representations of the events that transpired, are perhaps instead the unchallenged accounts of our life story, adjusted and embellished to say what our most captive audience—ourselves—wants to hear.

APPENDIX

Behavioral identification items from Study 1. Note: items are marked with an “H” to signify high level or with an “L” to signify low level.

Original BIF Items:

Making a list

Getting organized (*H*)

Writing things down (*L*)

Measuring a room for carpeting

Getting ready to remodel (*H*)

Using a yardstick (*L*)

Caring for houseplants

Watering plants (*L*)

Making the room look nice (*H*)

Toothbrushing

Preventing tooth decay (*H*)

Moving a brush around in one’s mouth (*L*)

Paying the rent

Maintaining a place to live (*H*)

Writing a check (*L*)

Immoral Identification Items:

Cheating on a significant other

Hooking up with someone else (*L*)

Being unfaithful (*H*)

Not correcting a cashier

Stealing from a business (*H*)

Keeping extra incorrect change (*L*)

Looking off of someone’s test

Checking someone else’s answer (*L*)

Cheating on an exam (*H*)

Ignoring a vegan friend’s dietary restrictions

Using chicken broth to make dinner (*L*)

Disrespecting a friend (*H*)

Not giving a library book back

Stealing from the library (*H*)

Keeping a book too long (*L*)

Behavioral identification items from Study 2. Note: items are marked with an “H” to signify high level or with an “L” to signify low level.

Cheating on a significant other

Hooking up with someone else (L)

Being unfaithful (H)

Not correcting a cashier

Stealing from a business (H)

Keeping extra incorrect change (L)

Looking off of someone’s test

Checking someone else’s answer (L)

Cheating on an exam (H)

Ignoring a vegan friend’s dietary restrictions

Using chicken broth to make dinner (L)

Disrespecting a friend (H)

Not giving a library book back

Stealing from the library (H)

Keeping a book too long (L)

Breaking an item that someone lent you

Damaging another person’s property (H)

Dropping something on the ground (L)

Telling an inappropriate joke

Being offensive (H)

Making others laugh (L)

Using your cell phone while someone is speaking

Being rude (*H*)

Checking your email (*L*)

Hiring a friend or family member for a job

Acting unfairly (*H*)

Signing hiring forms (*L*)

Using an expletive while speaking

Being inappropriate (*H*)

Speaking words (*L*)

Ignoring a homeless person asking for money

Averting your eyes (*L*)

Not helping someone in need (*H*)

Table 3: Item by item analysis for the behavioral identification items from Study 2.

Item	<i>M</i> -level	<i>M</i> -experience	Level-exp. <i>r</i>	Item-total <i>r</i>
Cheating on a significant other	.80	.22	-.33*	.11
Not correcting a cashier	.67	.39	-.37**	.35
Looking off of someone's test	.88	.51	.01	.32
Ignoring friend's dietary restrictions	.75	.10	-.56**	.45
Not giving a library book back	.75	.18	-.08	.55
Breaking item someone lent you	.84	.35	.09	.20
Telling an inappropriate joke	.71	.69	-.25 [†]	.53
Using phone while someone is speaking	.96	.59	-.17	.38
Hiring friend or family for a job	.53	.25	.01	.25
Using an expletive while speaking	.63	.86	-.07	.31
Ignoring homeless person	.59	.88	.07	.36

*Memory Items from Study 6. Note that the correct answer is **bolded**.*

- 1) Where was the game played?
 - a. Yankee Stadium
 - b. Fenway Park**
 - c. I don't remember
- 2) Who was the starting pitcher for the Red Sox?
 - a. Clay Buchholz
 - b. John Lackey
 - c. Jon Lester**
 - d. Jake Peavey
 - e. I don't remember
- 3) Who was the starting pitcher for the Yankees?
 - a. Michael Pineda**
 - b. Hiroki Kuroda
 - c. CC Sabathia
 - d. Masahiro Tanaka
 - e. I don't remember
- 4) At the bottom of the first inning, Red Sox second baseman Dustin Pedroia singled to center field, hitting in a scoring run. Who scored on this play?
 - a. Mike Napoli
 - b. David Ortiz
 - c. Grady Sizemore**
 - d. Mike Carp

- e. I don't remember
- 5) How many runs did the Yankees score in the top of the second inning? _____
- (Correct answer = 1)
- 6) In what inning was the Yankees pitcher ejected for using pine tar? _____
- (Correct answer = 2nd inning)
- 7) Where was the pine tar discovered on the pitcher's body? _____
- (Correct answer = neck)
- 8) Has this pitcher gotten into trouble for using pine tar before?
- a. No, he had never used pine tar before.
 - b. Yes, he has used pine tar before.**
 - c. I don't remember.
- 9) At the top of the 6th inning, Yankees left fielder Alfonso Soriano hit a sacrifice fly to right field, hitting in a scoring run. Who scored the run on this play?
- a. Carlos Beltran**
 - b. Jacoby Ellsbury
 - c. Mark Teixeira
 - d. Derek Jeter
 - e. I don't remember.
- 10) Who was the closing pitcher for the Red Sox?
- a. Chris Capuano
 - b. Edward Mujica
 - c. Andrew Miller
 - d. Koji Uehara**

e. I don't remember.

11) Who was the closing pitcher for the Yankees?

a. Shawn Kelley

b. Matt Thornton

c. **Andrew Warren**

d. David Robertson

e. I don't remember

12) What was the outcome of the game?

a. **The Red Sox won.**

b. The Yankees won.

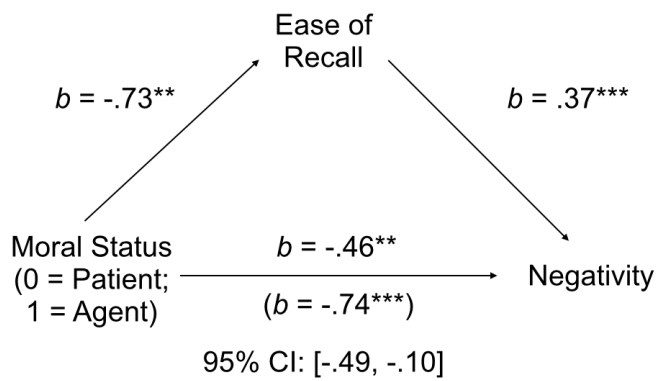
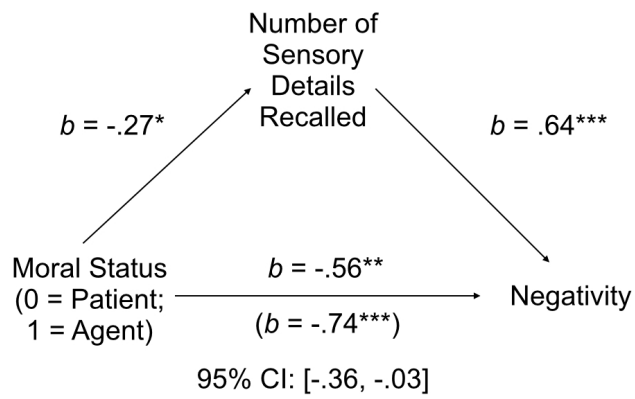
c. I don't remember.

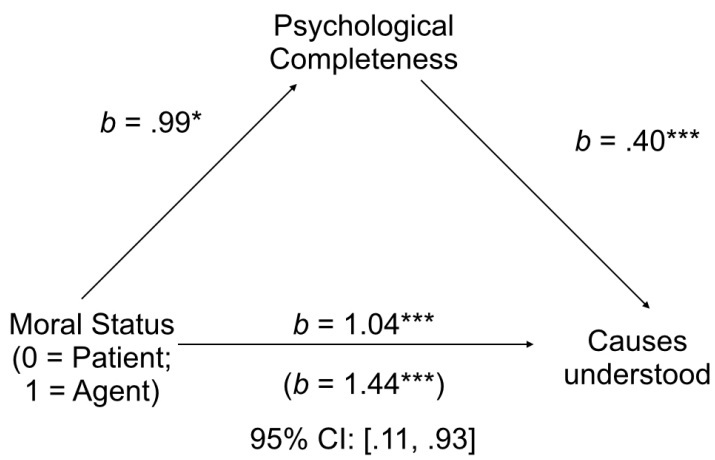
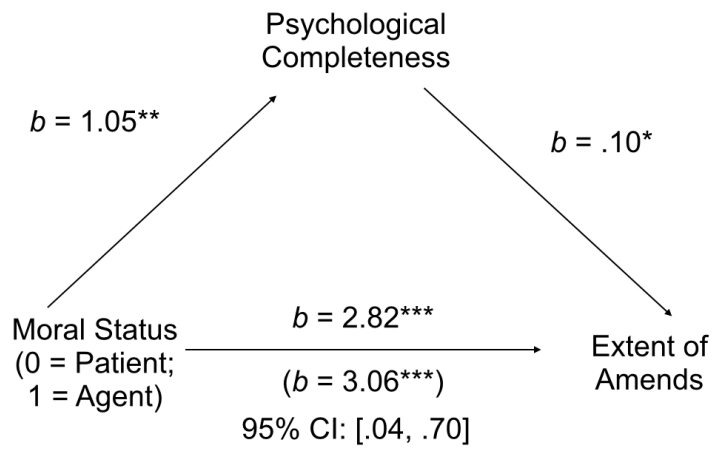
13) What was the final score of the game?

a. Number of runs scored by the Red Sox: _____ (**Correct answer = 5**)

b. Number of runs scored by the Yankees: _____ (**Correct answer = 1**)

Figures 14-17. Reverse mediation models for studies 4, 7, & 8.





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